development concept plan

proposal / assessment

september 1980

BUFFALO

STEEL CREEK-LOST VALLEY

NATIONAL RIVER / ARKANSAS

This plan has not yet been approved. Its purpose is to provide planning information for further consideration and discussion, and it may undergo revision.

PROPOSAL/ASSESSMENT
DEVELOPMENT CONCEPT PLAN

STEEL CREEK-LOST VALLEY

BUFFALO NATIONAL RIVER
ARKANSAS

Prepared by
Denver Service Center
National Park Service
United States Department of the Interior

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MAPS AND FIGURES

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INTRODUCTION AND PROBLEM STATEMENT

The act establishing Buffalo National River (P.L. 92-237) was approved by the president on March 1, 1972. On October 1, 1973, Buffalo River and Lost Valley state parks were turned over to the National Park Service. During 1974 and 1975 these were the only areas in the national river that had operating facilities.

In 1975 a conceptual plan entitled Master Plan, Buffalo National River was approved by National Park Service management. As described in the Master Plan, three major development sites are planned along the national river--Pruitt, Tyler Bend, and Buffalo Point (formerly Buffalo River State Park). Pruitt, located where Arkansas 7 crosses the Buffalo River, is the closest major site to the Steel Creek-Lost Valley area, even though it is 19 road miles away. It will be the district headquarters for the upper one-third of the national river, including Ponca, Steel Creek, and Lost Valley. (The national river headquarters is at Harrison.) The Pruitt development area will provide river access, primitive campgrounds, picnic areas, swimming beaches, sanitary facilities, and interpretive attractions for visitors.

The Master Plan for Buffalo National River designates Steel Creek-Lost Valley (referred to as Ponca-Lost Valley in that plan) as a minor site for use and operations in the Pruitt district. Plan guidelines for this site indicate that local businesses outside the boundary will be encouraged to serve visitor needs, a foot trail will be developed to parallel much of the river, and access to the river will be provided in the vicinity of Steel Creek.

This Development Concept Plan, Steel Creek-Lost Valley addresses design and development proposals for the Steel Creek, Ponca, and Lost Valley sites. These sites, located within a 3-mile area, are treated as a single development because their use patterns are closely related. Based on concepts in the Master Plan, general criteria have been established for planning the sites: (1) development should afford the most efficient management arrangement and the most beneficial visitor use program for this section of the national river; (2) needed facilities should be located as much as possible out of the 100-year flood zone; and (3) new facilities should be compatible with present and future road alignments and bridge locations and should utilize a minimal amount of developable terrain. In addition, because a major asset of the Buffalo River is the purity of its water, development should be planned to ensure minimal pollution from erosion during construction, and sewage should be handled so that river water quality is not adversely affected.

Concerning specific sites within the development area, the following additional factors have been reflected.

LOST VALLEY

Lost Valley's year-round visitor use is largely associated with the surrounding natural features. Visitors engage in camping, picnicking, and hiking. The general area is also conducive to scenic driving, fishing, and hunting--although hunting is not permitted within the development area.

Problems currently stem from inadequate facilities to protect the environment from the impacts of visitor use in an area with limited terrain suitable for development. Sites at the mouth of Lost Valley and Steel Creek are better suited than other potential development areas because more land is available to provide for visitor needs. Developing these larger parcels of land would also reduce environmental impacts.

PONCA

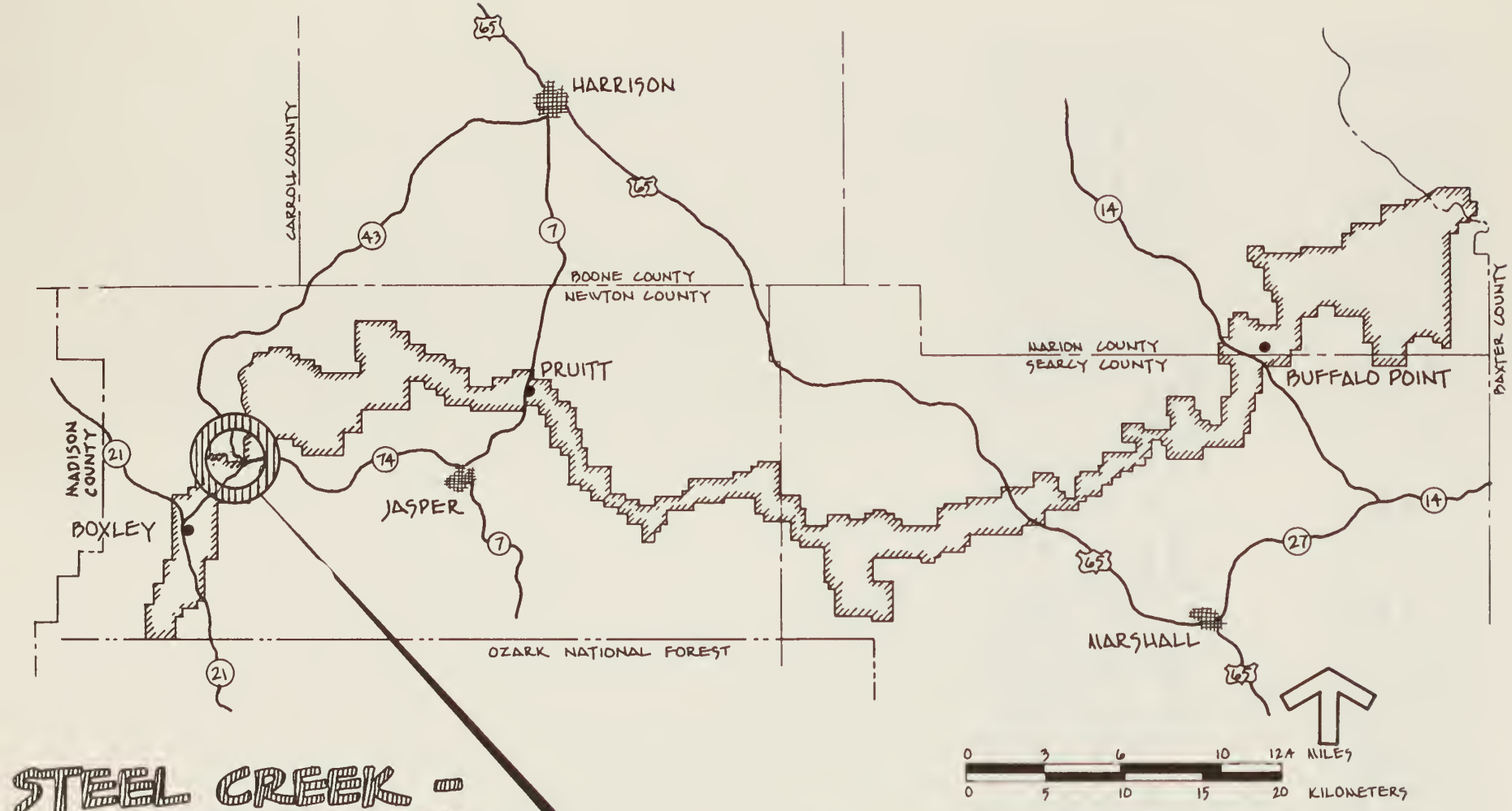
The Ponca low-water bridge has been the traditional launching site for spring canoeing, primarily because there is public river access. In spring, the site has experienced intensive use by floaters parking autos, unloading gear from autos, loading gear into canoes, and launching canoes. This activity has taken place on or immediately adjacent to Arkansas 74 and the single-lane bridge, and congested conditions and visitor safety have been primary concerns in the area.

Acquisition of the Steel Creek site has allowed all activities that formerly took place at Ponca to be accommodated there. Management has already reduced congestion at Ponca by encouraging floaters and outfitters to launch at Steel Creek.

The only facilities needed at Ponca are those that will help visitors enjoy historical farmstead exploration and hiking in the Leatherwood Creek area.

STEEL CREEK

Other than floaters occasionally stopping along the river, there was no visitor use at Steel Creek prior to 1976, when it was acquired from the private owner. Facilities there have since been adapted for Park Service operations. Adapted facilities include a ranger office, a ranger residence, a cooperative research laboratory, and storage buildings. Visitors currently use the site for canoe launching and camping.



STEEL CREEK - LOST VALLEY

LOCATION

BUFFALO NATIONAL RIVER

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Steel Creek, adjacent to the river bank, is ideally situated to support river users, and it also has sufficient space for development of associated facilities above the floodplain. The Ponca Wilderness Area, covering 11,300 acres, surrounds the Steel Creek site on three sides; therefore, Steel Creek also has potential for use as a trailhead.

BOXLEY GRIST MILL

The Boxley grist mill is not located in the main development area, but it is an important nearby resource that has potential as a visitor attraction. It is listed on the National Register of Historic Places as being of regional significance. Locally referred to as "Old Boxley Grist Mill," the structure is still in private ownership and not open to the public. When it is acquired, the National Park Service will assume responsibility for maintaining the historic mill, mill pond, and millrace. Exhibits and/or guided tours will be needed to interpret the story of the mill and the farming community it served.

the proposal

DESCRIPTION

Under the proposal, the Steel Creek-Lost Valley area will include minimal new development to support moderate increases in visitor use. Most operational facilities necessary to support additional use will be located at Steel Creek.

LOST VALLEY

Lost Valley, a day use area, will have parking, a picnic area, restrooms, informational signs, an outdoor information exhibit, and trails. The existing ranger residence will be retained, and the sewage treatment facilities, which include a septic tank and leachfield, will remain. The Beechwood community center and cemetery will continue to be used by community residents. Existing power lines will be used wherever possible to support new park developments. Facilities at Lost Valley will cover about 3 acres.

Arkansas 43 has been upgraded and realigned in the vicinity of Lost Valley to follow an alignment closer and parallel to the river. This road construction was done by the Arkansas Highway Commission. Sections of the old roadbed will be used for management access and utility roads.

The present Lost Valley entrance road will be obliterated, and a new entrance road will be built parallel to and upslope from the Clark Creek floodplain in line with old Arkansas 43 on the north side of Clark Creek.

PONCA

To minimize traffic congestion and unsafe parking near the Ponca bridge site, most canoe launching has been relocated at Steel Creek. The Arkansas Highway Commission proposes to build a new high bridge at Ponca, but it may be years before this construction occurs.

The historic Villines farmstead on the east side of the river at Ponca will be preserved, maintained, and interpreted. Since the structure itself is of primary importance, there will be no restoration of the interior furnishings. Visitors to the farmstead and the Leatherwood Creek trails will park on the hilltop northeast of the historic structures. Cars will enter the parking area at the intersection of Arkansas 74 and a power line clearing. There will be restrooms nearby with chemical toilets or pumpable holding tanks. The parking area and restrooms will not be visible from the historic buildings. A trail will connect the parking area with the

Villines farmstead and the Leatherwood Creek trails. The existing access road below the historic house will be closed. Developments at Ponca will cover 2 acres.

The Beaver Jim boyhood home on the west side of the Arkansas 74/43 junction will have a small parking area for people who wish to view this historic house. Interpretive signing will be provided.

STEEL CREEK

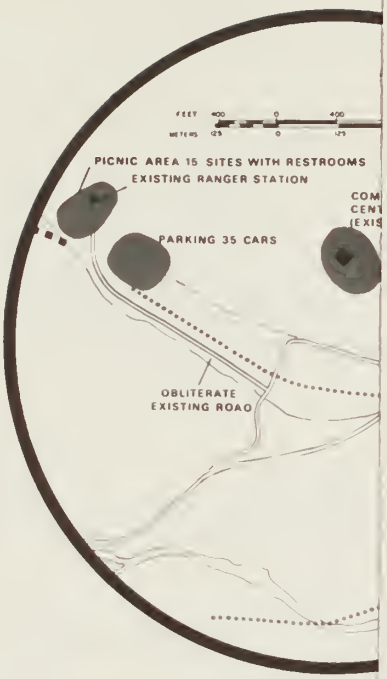
The Steel Creek area will include two launching sites for floaters, an adjacent 80-site carry-in campground, two parking areas above the flood line, two picnic areas, and a swimming beach. The launching sites have already been established, and some tent camping currently takes place.

A seasonal contact/information station for floaters and hikers will be provided in the area. One existing residence will continue to be used as a ranger residence, the other as a research laboratory. Other existing buildings will be utilized for maintenance and storage for the entire upper river area. Sewage treatment facilities here will be adequate to handle heavy seasonal use. Facilities providing tertiary treatment capability may be necessary in the future if visitor use continues to grow. Existing power lines will be utilized to service new park development wherever possible.

Steel Creek developments will cover 10 acres above the 100-year flood line and 8 acres below it. Acreage below the 100-year flood line will accommodate the canoe-launching areas, the swimming beach, one picnic area, and part of the carry-in campground.

BOXLEY GRIST MILL

Parking will be provided near the old Boxley grist mill, screened by trees. The mill will be interpreted by signs. The structure will be preserved and stabilized but not restored to operable condition.



LEGEND

NATIONAL RIVER BOUNDARY

ROAD (EXISTING)

ROAD (PROPOSED)

PROPOSED DEVELOPMENT

EXISTING BUILDING

TRAIL (EXISTING)

TRAIL (PROPOSED)

0 2000 4000 6000 8000 FEET

0 600 1200 1800 2400 METERS

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REEK—LOST VALLEY

O NATIONAL RIVER

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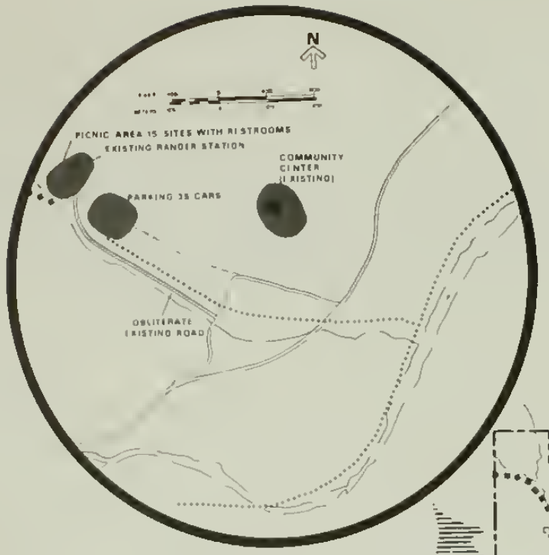
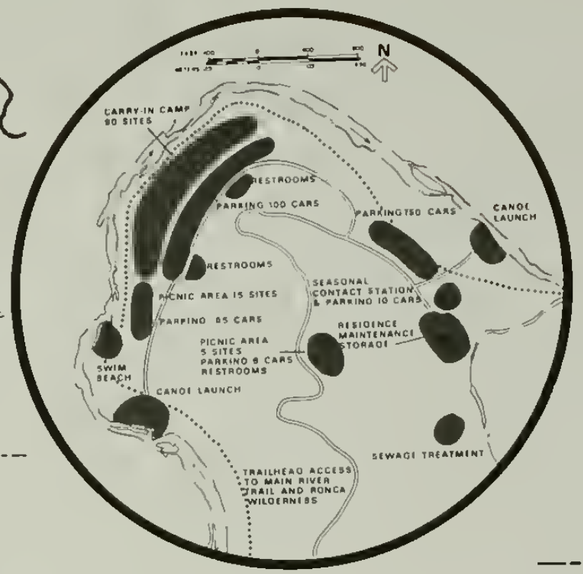
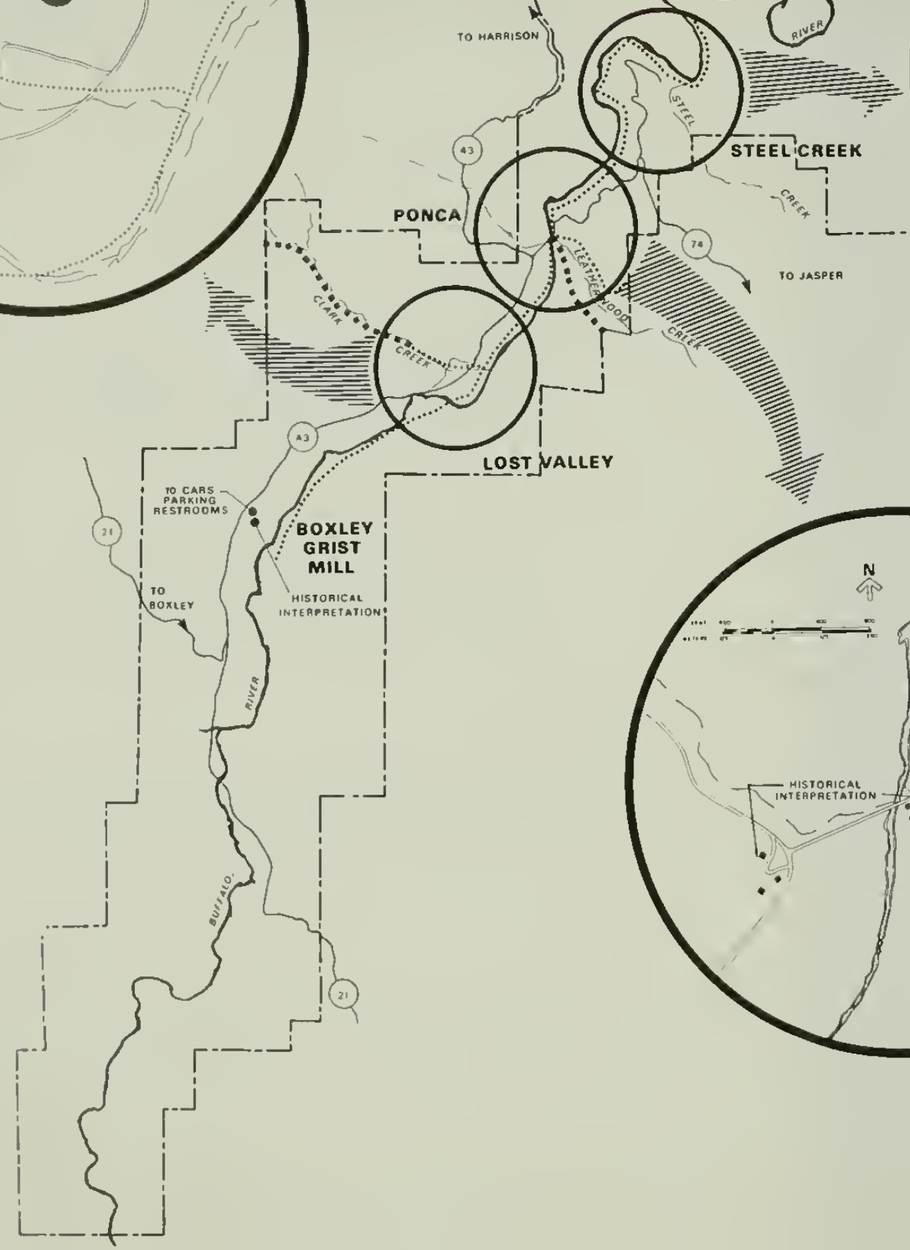
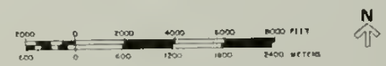






LEGEND

- NATIONAL RIVER BOUNDARY
- ROAD (EXISTING) (71)
- ROAD (PROPOSED)
- PROPOSED DEVELOPMENT
- EXISTING BUILDING
- TRAIL (EXISTING)
- TRAIL (PROPOSED)



Proposed Development

development concept

STEEL CREEK — LOST VALLEY

BUFFALO NATIONAL RIVER

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE

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ENVIRONMENTAL IMPACTS

NATURAL ENVIRONMENT

Vegetation and Wildlife

Although construction will be minor, there will be some associated disturbance of soils, vegetation, and wildlife. A total of 23 acres will be developed, including 8 acres below the 100-year flood line. About 18 of the 23 acres have been previously disturbed.

Air Quality

Increases in air pollutants from automobile exhausts will be insignificant.

Water Quality

Water quality will not be affected by sewage effluent, because all effluent will be treated in conformance with state and U.S. Public Health Service standards before being returned to the ground. A limited amount of soil will be washed into the river as a result of disturbance during construction and subsequent rains.

Aesthetic Quality

Some proposed roads and facilities will intrude on the natural and agricultural scene; however, impacts will be minimal because most developments will be situated in areas that have been previously cleared or disturbed.

CULTURAL ENVIRONMENT

Making the historic resources more available to visitors will increase the potential for vandalism and wear. Sites listed on the National Register of Historic Places will be affected both physically and aesthetically by construction and development.

SOCIOECONOMIC ENVIRONMENT

Local Businesses

The limited development in the Steel Creek-Lost Valley area will not encourage large increases in recreational use; however, the minor

increases in public travel and spending will be an economic stimulus to local businesses.

Operations

The canoe launches will continue to be susceptible to inundation during floods. Flooding may also affect such facilities as access roads and portions of the carry-in campground at Steel Creek. If these facilities are inundated by floods, resulting in soil deposition and erosion, maintenance requirements will increase.

Visitor Use

Inundation of the canoe-launching areas during floods will render them temporarily unusable. Flooding will make the river unsafe for canoeing.

Construction of the new Lost Valley entrance road will cause temporary visitor inconveniences. Establishment of the two launching sites at Steel Creek has already reduced the conflicts between local motorists and people launching canoes at the Ponca low-water bridge.

Interpretive services in the area will provide minimal personal contact or historic site interpretation.

Traffic Flow

Proposed developments will stimulate some increases in visitor use. Traffic may increase from the current 150 to 190 vehicles per day to approximately 225 to 285 vehicles per day in five to ten years.

MITIGATING MEASURES

NATURAL ENVIRONMENT

Proper design and supervision of construction activities will minimize disturbance of existing vegetation. Facilities will be screened by trees to reduce the visual impacts of development. Newly constructed roadbanks and old road scars will be revegetated, thus minimizing the potential for erosion and visual scars.

CULTURAL ENVIRONMENT

Protective staff and limited interpretive personnel will supervise and monitor visitor use and institute preventive measures to avoid damage to cultural resources wherever possible.

Construction areas will be thoroughly surveyed by a professional archeologist. Any significant archeological sites located in construction areas will be avoided, or mitigating actions taken. Any sites determined eligible for listing on the National Register of Historic Places will be nominated to the register, and mitigating actions will be developed in compliance with 36 CFR 800. Salvage excavations will be conducted only if there is no feasible alternative for location of facilities.

The Boxley grist mill is currently listed on the National Register of Historic Places. Before approval of proposals for this site, compliance with section 106 of the National Historic Preservation Act and its implementing procedures (36 CFR 800) will be accomplished.

SOCIOECONOMIC ENVIRONMENT

Proper design will reduce the potential for flood damage and additional maintenance in the canoe-launching and picnic areas by ensuring ready portability of movable facilities and erosion resistance of permanent ones.

A rise in the water level, indicating an approaching flood, should provide sufficient warning to permit visitors in the floodplain to reach safety. An audible electronic warning system has been installed to offer additional warning for both protection personnel and visitors.

Mobile protection personnel will periodically make personal contacts with visitors.

UNAVOIDABLE ADVERSE EFFECTS

Some disturbance of natural resources during facility construction will be unavoidable. There will also be limited site disturbance during road construction. Some soils will be washed into the river as a result of this construction, which will temporarily affect river water clarity. Some roads and facilities that are established will be an intrusion on the natural and agricultural scene.

Although vegetative screening will partially mitigate the impact of new facilities on the historic scene, a certain degree of intrusion will occur. Vandalism and wear caused by additional visits to historic features cannot be totally avoided.

Facilities in the floodplain will continue to be subject to minor damage during floods, requiring additional maintenance. Visitor contact and protection activities will be disrupted during floods, especially at the low-water bridge at Ponca. Some visitor inconveniences will occur during construction of the new entrance road.

SHORT-TERM/LONG-TERM RELATIONSHIPS

Facilities providing for visitors' recreational needs will help channel more intensive uses away from sensitive resources and will contribute to resource protection--in line with the long-term goal of preservation for use by future generations--while still serving current visitor needs.

The limited facilities under the proposal will provide only marginal support in minimizing visitor impacts on the resources and managing for long-term productivity.

IRREVERSIBLE/IRRETRIEVABLE COMMITMENTS OF RESOURCES

No irreversible commitments are contemplated.

This plan will commit the natural resources in the development zone to nonconsumptive recreational use only. Money, materials, and labor for construction will be irretrievably committed.

SUMMARY OF FACILITIES IN PROPOSED DEVELOPMENT

LOST VALLEY	PONCA	STEEL CREEK	BOXLEY
Information exhibit Parking (35 cars) Picnic area (existing) with restrooms Trails Community center (existing) Residence (existing)	Historic buildings (existing) Parking (20 cars) with restrooms Trails	Canoe-launching sites (2) Swim beach Carry-in campground (80 sites) Picnic areas (2; 20 sites total) with restrooms Seasonal contact station Residence (existing) Maintenance/storage buildings (existing) Sewage treatment facilities Parking (333 cars)	Historic building (existing) Parking (10 cars) with restrooms

COST ESTIMATES - PROPOSAL

Lost Valley site	
Construct information exhibit	$ 6,000
Rehabilitate existing picnic sites	4,000
Construct parking area (35 spaces)	70,000
Construct restrooms (vault toilets)	16,000
Rehabilitate utility systems (water and sewage)	50,000
Upgrade trail (1 1/4 miles)	25,000
Obliterate existing road (1/2 mile)	23,000
Construct entrance road (1/2 mile)	175,000
Subtotal	$ 369,000
Ponca site	
Construct comfort station	$ 67,000
Construct parking area (20 spaces)	41,000
Provide trail signs	3,000
Rehabilitate Villines farmstead historic area	345,000
Subtotal	$ 456,000
Steel Creek site	
Provide canoe launch signing (2 areas)	$ 3,000
Establish swim beach	9,000
Construct carry-in campground (80 sites)	88,000
Construct picnic areas (20 sites at 2 areas)	34,000
Construct comfort stations (3)	225,000
Provide contact station	70,000
Provide maintenance/storage area (rehabilitation)	50,000
Construct water system	166,000
Construct sewage system	333,000
Construct parking areas (333; 150 floater spaces on grass near launching site)	448,000
Subtotal	$1,426,000
Boxley mill site	
Stabilize/restore mill	$ 67,000
Construct parking (10 spaces)	21,000
Construct access road (300 l.f.)	29,000
Construct restrooms (vault toilets)	16,000
Subtotal	$ 133,000
Total Gross Cost	$2,384,000

Note: All costs are gross amounts and include actual expenses and design and contract supervision. Certain grounds, trails, and rehabilitative work could be done by the Young Adult Conservation Corps, if the YACC program is still operational.

assessment of alternatives

In planning for the Steel Creek-Lost Valley area, many alternatives and options were considered. The alternative with the least environmental impact and the greatest probability of achieving the management objectives for the area is presented in this document as the proposal. The other alternatives that were considered most viable prior to selection of the proposal are presented here as alternatives A and B.

One of the alternatives considered earlier in the planning process was the no-action alternative. This alternative was not considered feasible because of the obligation of the National Park Service to protect historic resources, natural resources, and visitors in an area where visitor use and resource abuse are problems. The no-action alternative would permit current management to continue, but as more of the area and resources are acquired by the National Park Service, existing management facilities would become inadequate. Therefore, the no-action alternative has been eliminated from further study.

ALTERNATIVE A: VISITOR DEVELOPMENT AT LOST VALLEY AND STEEL CREEK AND OPERATIONS AT STEEL CREEK

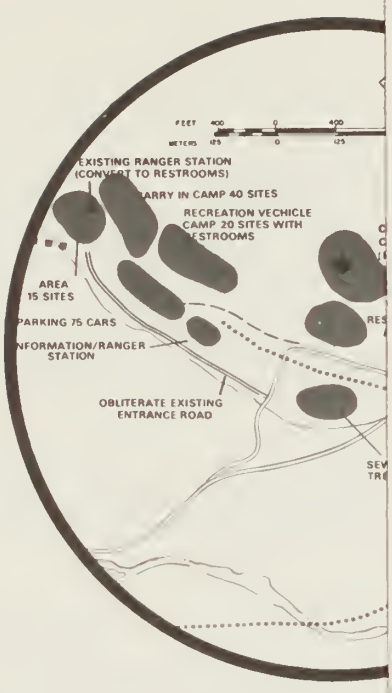
DESCRIPTION

Under this alternative, visitor facilities would be based as much as possible at Lost Valley. The Ponca site would provide only minimal services for visitors to the historic structures and the trails into Leatherwood Creek. Boxley would have a seasonally staffed interpretive station. The Steel Creek site would provide visitor use facilities and maintenance/operations facilities.

Lost Valley

Because one of the aims of the master plan is to minimize intrusions on the natural scene within Lost Valley, development would be located at the mouth of the valley where it widens into the Buffalo River valley. Upon entering Lost Valley from Arkansas 43, visitors would first encounter a staffed information/ranger station. Carry-in camping and picnicking facilities would be located northwest of the station in the general area of the existing picnic and camping area, but they would also extend farther into the open areas to the east. Cars would be parked at the lower end of these facilities. A 20-site recreation vehicle camp would be located east of the existing camping area. The nearby Beechwood community center and cemetery would continue to be used by community residents. A National Park Service residential area would be located south of the community center and north of the Lost Valley entrance road, providing family quarters for two protection rangers and apartments for seasonal personnel. The new sewage treatment plant south of the road would have tertiary treatment capability and would be located so that the collection system would function by gravity feed. Developments at Lost Valley would cover about 14 acres.

Arkansas 43 has been improved and realigned in the vicinity of Lost Valley. The road now follows an alignment closer and parallel to the river, allowing more developable area on the west side of the road. Under alternative A, sections of the old roadbed would be used for NPS management access and utility roads. Also under this alternative, the present Lost Valley entrance road would be obliterated, and a new entrance road would be built parallel to and upslope from the Clark Creek floodplain in line with old Arkansas 43 on the north side of Clark Creek.



LEGEND

NATIONAL RIVER BOUNDARY

ROAD (EXISTING)

ROAD (PROPOSED)

PROPOSED DEVELOPMENT

EXISTING BUILDING

TRAIL (EXISTING)

TRAIL (PROPOSED)

2000 4000 6000 8000 FEET
600 1200 1800 2400 METERS

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REEK—LOST VALLEY

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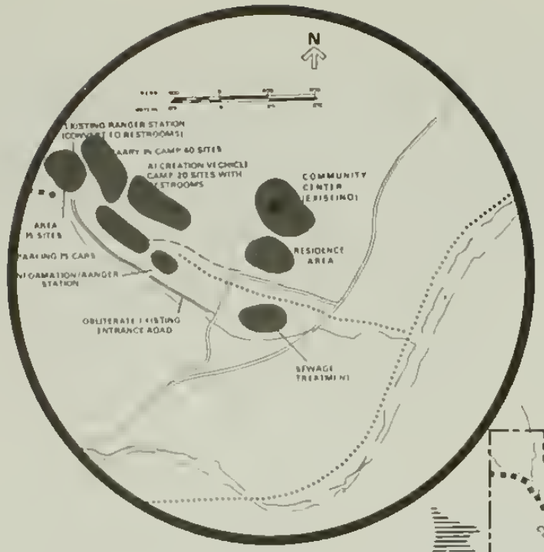

LEGEND

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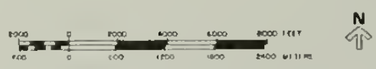

Alternative A

development concept

STEEL CREEK — LOST VALLEY

BUFFALO NATIONAL RIVER

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE

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Ponca

The historic Villines farmstead on the east side of the river at Ponca would be preserved, partially restored, and interpreted. The structure would be restored, but not the interior furnishings. Visitors to the farmstead and the Leatherwood Creek trails would park in a clearing just north of the farmstead. Parking would be screened from historic structures by existing trees. A new access road from Arkansas 74, just uphill from the first big bend in the road, would lead directly to the parking area. The existing access road below the historic house would be closed. Total development in the Ponca area would cover 2 acres.

A small parking area would be provided at the historic Beaver Jim boyhood home just west of the junction of Arkansas 74 and 43, and the site would be interpreted by signs.

Steel Creek

The existing ranch buildings would continue to be used as an information/ranger station, a residence, and a maintenance area. Upper and lower canoe-launching areas would be provided, and long-term parking would be located nearby above the flood line. A campground with carry-in sites would be developed, which would also have adjacent parking. The existing residence would remain, and a residence and seasonal apartments would be constructed. A former residence would be adapted for continued use as a research laboratory.

Facilities would be located on 8 acres above the 100-year flood line; 8 acres below the flood line would be utilized for canoe launching and the carry-in campground.

Boxley Grist Mill

Exhibits and an information station staffed on a scheduled basis would be provided in the Boxley grist mill to interpret the mill and its role in the development of the community. Restrooms and parking would be located a short distance from the mill, screened by trees. With appropriate restoration work on the mill and millrace, the mill could become operable. A self-guiding trail would be constructed around the mill pond, and the historic and natural features interpreted.

ENVIRONMENTAL IMPACTS

Natural Environment

Vegetation and Wildlife. Some disturbance of vegetation and wildlife would occur during development of access roads, parking areas, buildings, sanitary facilities, and paths at Ponca, Lost Valley, the Boxley mill, and Steel Creek. These impacts might include soil erosion and compaction, destruction and trampling of vegetation, and disturbance of animal habitat. Approximately 33 acres would be disturbed by development, including 8 acres at Steel Creek below the 100-year floodplain. With activities centered at Lost Valley, the natural setting there could sustain similar impacts from visitor use.

Air Quality. Air pollutants would increase proportionately with increased traffic but would still be of minor significance. Traffic on gravel roads would contribute dust to the air.

Water Quality. Water quality would not be affected by sewage effluent, since all effluent would be treated in conformance with state and U.S. Public Health Service standards before being returned to the ground. A limited amount of soil would be washed into the river as a result of disturbance during construction and subsequent rains.

Aesthetic Quality. Access roads, parking areas, sanitary facilities, the information/exhibit building, and pathways would be an intrusion on the natural and agricultural scene. Development would encourage additional visitor use, which would introduce more traffic with resultant increases in noise and congestion in this generally quiet, pastoral valley.

Cultural Environment

Making the historic resources more available to visitors would increase the potential for vandalism and wear; however, staffing the Boxley grist mill on a scheduled basis would help protect the resources there. Access roads, parking areas, sanitary facilities, and pathways at Ponca and Boxley would be an intrusion on the historic scene. The construction of roads and facilities might disturb as yet undiscovered archeological sites. Sites listed on the National Register of Historic Places would be affected both physically and aesthetically by construction and development.

Socioeconomic Environment

Local Businesses. Increased visitor use could be expected because of additional development, which would result in more demands for

meals, lodging, rentals, and merchandise. There are no lodging or food service concessions planned in the Steel Creek-Lost Valley area; consequently, local businesses, especially in Ponca, would be motivated to expand. Business expansion would provide more jobs and income for residents.

National river personnel and their families would require community services, especially schooling and medical services. These families would contribute increased revenue in the form of purchases and taxes.

Operations. Access roads and structures in the floodplain would require additional maintenance if they were inundated during floods. Construction of buildings on soils where limitations are severe might result in subsequent maintenance problems.

Visitor Use. Inundation of the canoe-launching areas during floods would render them temporarily unusable. Flooding would make the river unsafe for canoeing.

Construction of the new Lost Valley entrance road would cause temporary visitor inconveniences. Moving the launching activities downstream from Ponca to Steel Creek has already reduced the conflicts between local motorists and people launching canoes at the Ponca bridge.

The provision of informational staff at the Boxley grist mill would enhance visitor experiences because of increased personal contact and interpretation.

Traffic Flow. Traffic per day (averaged on an annual basis) could increase from the current 150 to 190 vehicles per day to approximately 225 to 285 vehicles per day in five to ten years. Traffic in and near Ponca would increase.

MITIGATING MEASURES

Natural Environment

Development would be located at the mouth of Lost Valley and in the Buffalo River valley, which would minimize impacts on the scenic natural features in Lost Valley.

Proper design and supervision of construction activities would minimize disturbance of existing vegetation. Facilities would be screened by trees to reduce the visual impacts of development. Newly constructed road banks and old road scars would be revegetated, minimizing the potential for erosion and visual scars.

Cultural Environment

The parking area and sanitary facilities at the Boxley mill would be screened by trees to reduce their intrusion on the historic scene.

Protective and interpretive personnel would supervise and monitor visitor use and would institute preventive measures to avoid damage to cultural resources wherever possible.

Construction areas would be thoroughly surveyed by a professional archeologist. Any significant archeological sites located in construction areas would be avoided, or mitigating actions taken. Any sites determined eligible for listing on the National Register of Historic Places would be nominated to the register, and mitigating actions would be developed in compliance with 36 CFR 800. Salvage excavations would be conducted only if there was no feasible alternative for location of the facilities.

The Boxley grist mill is currently listed on the national register. Before approval of any actions at this site, compliance with section 106 of the National Historic Preservation Act and its implementing procedures (36 CFR 800) would be accomplished.

Socioeconomic Environment

Special attention would be given to design details for buildings constructed in areas with severe soil limitations to eliminate possible maintenance problems.

All facilities located on a floodplain would be designed and constructed to withstand periodic inundation.

A rise in water level, indicating an approaching flood, should provide sufficient warning to permit visitors in the floodplain to reach safety. An audible electronic warning system has been installed to offer additional warning for both protection personnel and visitors.

UNAVOIDABLE ADVERSE EFFECTS

Some disturbance of natural resources during facility construction would be unavoidable. There would also be limited site disturbance during road construction. Some soils would be washed into the river as a result of this construction, which would temporarily affect river water clarity. The roads and facilities that were established would be an intrusion on the natural and agricultural scene. Minor increases in air pollutants would result from increased traffic.

Although vegetative screening would partially mitigate the impact of new facilities on the historic scene, a certain degree of intrusion would occur. Vandalism and wear caused by additional visits to historic features could not be totally avoided.

Facilities in the floodplain would continue to be subject to minor damage during floods, requiring additional maintenance. Visitor circulation patterns would also be disrupted during floods, especially at the low-water bridge at Ponca. Some visitor inconveniences would occur during construction of the new entrance road. Additional traffic in the valley would result in some congestion on roads and in developed areas during heavy use periods.

SHORT-TERM/LONG-TERM RELATIONSHIPS

In the short term, more land would be developed and more overnight visitors could be accommodated. Increased development, while permitting more efficient management of visitor use and park resources, would also lead to proportionately greater degradation of the resources. Operating costs for maintenance, visitor protection, and interpretation would be proportionately greater over the long term.

IRREVERSIBLE/IRRETRIEVABLE COMMITMENTS OF RESOURCES

No irreversible commitments are contemplated.

This alternative would commit the natural resources in the development zone to nonconsumptive recreational uses only. Money, material, and labor for construction would be irretrievably committed.

SUMMARY OF FACILITIES UNDER ALTERNATIVE A

LOST VALLEY	PONCA	STEEL CREEK	BOXLEY
Information/ranger station Picnic area (15 sites) Carry-in campground (40 sites) RV campground (20 sites Parking (75 cars) with restrooms Residences (2) and seasonal apartments Sewage treatment facility Trails Community center (existing)	Historic buildings (existing) Parking (20 cars) Trails	Canoe-launching sites (2) Carry-in campground (80 sites) Information/ranger station with restrooms Residences (2; 1 existing) and seasonal apartments Maintenance/storage buildings (existing) Sewage treatment facilities Parking (300 cars)	Historic building (existing) Parking (15 cars) with restrooms Trail

COST ESTIMATES-ALTERNATIVE A

Lost Valley site	
Convert comfort station (from existing ranger residence)	$ 67,000
Rehabilitate picnic area (existing)	4,000
Construct carry-in campground (40 sites)	44,000
Construct RV campground (20 sites)	34,000
Construct parking area (75 spaces)	126,000
Construct comfort station	76,000
Construct sewage system	333,000
Upgrade utility system	166,000
Construct seasonal apartments	250,000
Construct residences (2)	150,000
Obliterate existing road (1/2 mile)	23,000
Upgrade trail (1 1/2 miles)	25,000
Construct entrance road (1/2 mile)	175,000
Subtotal	$1,473,000
Ponca site	
Construct parking area (20 spaces)	$ 41,000
Provide trail signs	3,000
Rehabilitate Villines farmstead historic area	301,000
Subtotal	$ 345,000
Steel Creek site	
Provide canoe launch signing (2 areas)	$ 3,000
Construct carry-in campground (80 sites)	88,000
Provide information/ranger station	70,000
Construct comfort stations (2)	150,000
Upgrade residence (1)	25,000
Construct seasonal apartments	250,000
Rehabilitate maintenance building	83,000
Construct water system	166,000
Construct sewage system	333,000
Construct parking area (300 spaces; 150 floater spaces on grass near launching site)	400,000
Subtotal	$1,568,000
Boxley mill site	
Restore mill	$ 166,000
Construct restrooms (vault toilets)	16,000
Construct utility systems	55,000
Construct parking area (15 spaces)	31,000
Construct trail (2,000 l.f.)	9,000
Construct access road (300 l.f.)	29,000
Subtotal	$ 306,000
Total Gross Cost	$3,692,000

ALTERNATIVE B: VISITOR DEVELOPMENT AND OPERATIONS AT STEEL CREEK

DESCRIPTION

Under this alternative, most base facilities for operations and visitor use would be located at Steel Creek. Lost Valley, Ponca, and Boxley would have day use activities only.

Lost Valley

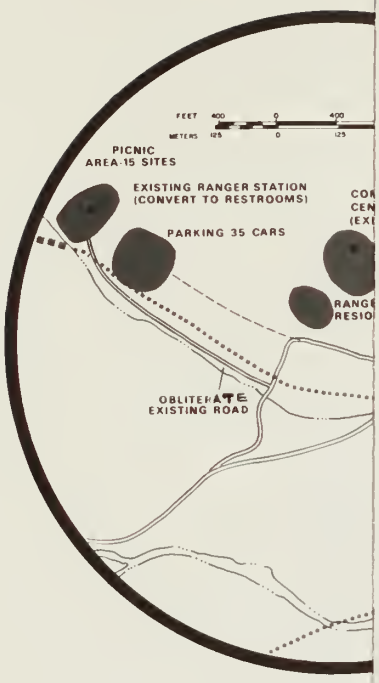
Facilities at Lost Valley would be only those essential for maintaining the resource and serving basic visitor needs: an unstaffed information exhibit, a parking area, restrooms, drinking water, a hiking trail, and a picnic area. The existing ranger residence would be renovated to accommodate restrooms and an information exhibit, and a new ranger residence would be constructed. A staffed mobile interpretive unit could be placed here as needed. The sewage treatment facility would be improved, with additional septic tanks and leachfields provided. Facilities at Lost Valley would cover about 4 acres.

Arkansas 43 has been improved and realigned in the vicinity of Lost Valley. The road now follows an alignment closer and parallel to the river.

The present Lost Valley entrance road would be obliterated, and a new entrance road would be built parallel to and upslope from the Clark Creek floodplain in line with old Arkansas 43 on the north side of Clark Creek.

Ponca

The historic Villines farmstead on the east side of the river at Ponca would be preserved, maintained, and interpreted. The structure would be restored, but not the interior furnishings. Visitors to the farmstead and the Leatherwood Creek trails would park in a clearing just north of the farmstead. Restrooms with chemical toilets or pumpable holding tanks would be located here. The restrooms and parking area would be screened from historic structures by existing trees. A new access road from Arkansas 74, just uphill from the first big bend in the road, would lead directly to the parking area. The existing access road below the historic house would be closed. Development at Ponca would cover 2 acres.



LEGEND

NATIONAL RIVER BOUNDARY

ROAD (EXISTING)

ROAD (PROPOSED)

PROPOSED DEVELOPMENT

EXISTING BUILDING

TRAIL (EXISTING)

TRAIL (PROPOSED)

0 2000 4000 6000 8000 FEET
0 600 1200 1800 2400 METERS

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REEK—LOST VALLEY

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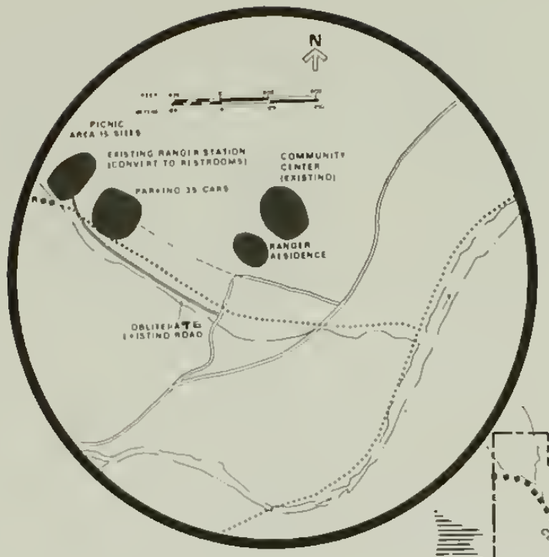
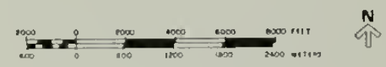


LEGEND

- NATIONAL RIVER BOUNDARY
- ROAD (EXISTING) (71)
- ROAD (PROPOSED)
- PROPOSED DEVELOPMENT
- EXISTING BUILDING
- TRAIL (EXISTING)
- TRAIL (PROPOSED)



Alternative B

development concept

STEEL CREEK — LOST VALLEY
BUFFALO NATIONAL RIVER

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE

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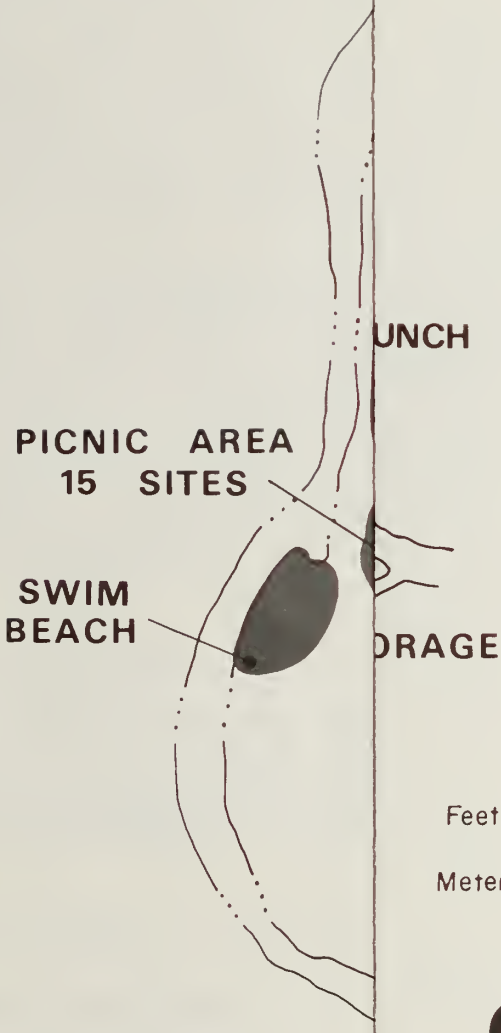

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Feet 400 0 400 800

Meters 125 0 125 250

alternative B site plan for STEEL CREEK

BUFFALO NATIONAL RIVER

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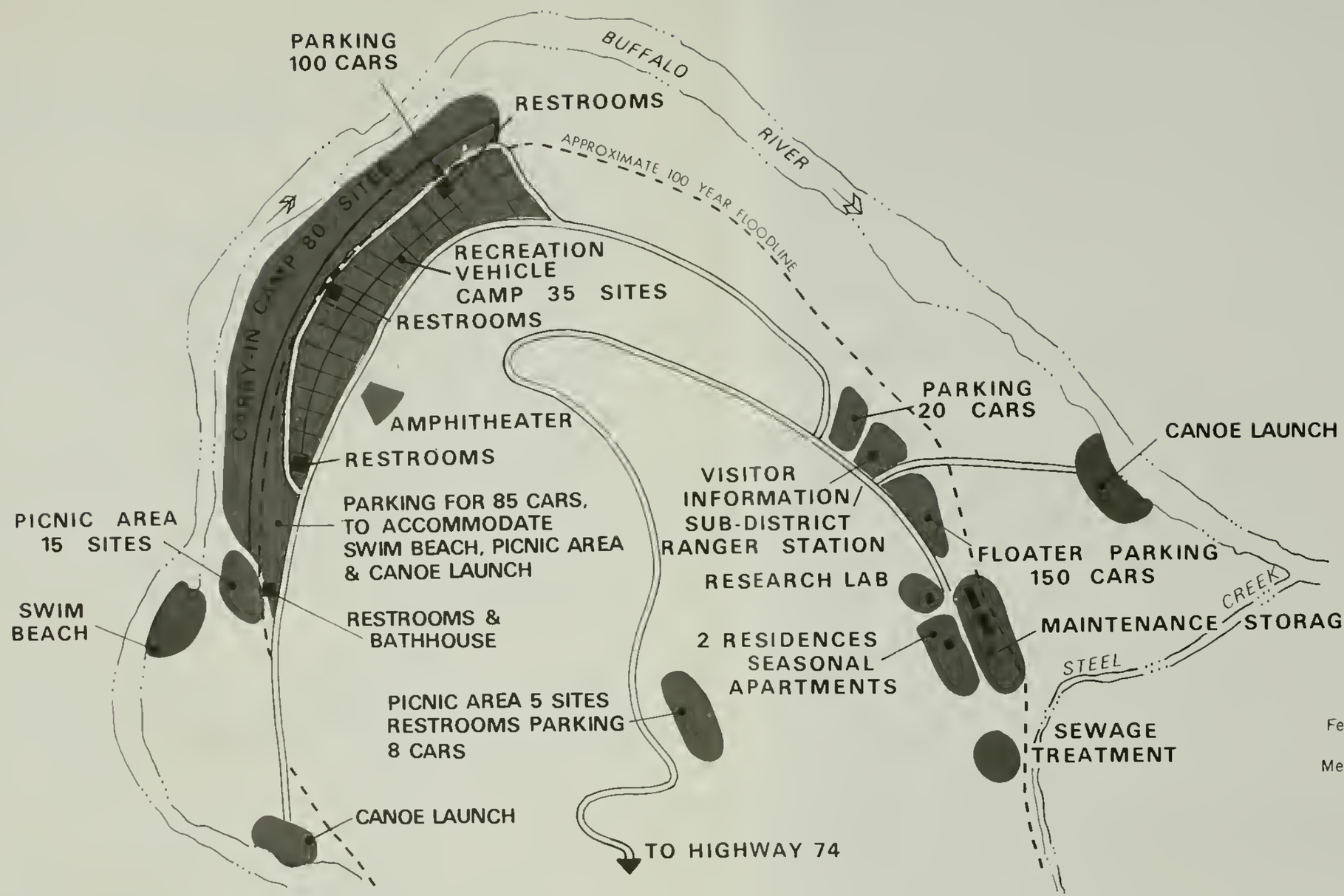

alternative B site plan for STEEL CREEK

BUFFALO NATIONAL RIVER

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE

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A separate small parking area would be provided at the Beaver Jim boyhood home just to the west of the junction of Arkansas 74 and 43, and the site would be interpreted by signs. The structure would be stabilized and maintained.

Steel Creek

Steel Creek would serve both day and overnight visitors, with information and interpretation available at a ranger/information station adjacent to the ranch buildings. Recreation activities would include canoe launching, carry-in camping, recreation vehicle camping, picnicking, swimming, wilderness hiking, fishing, backpacking, and trail hiking. A parking area for floaters on overnight trips would be located above the 100-year flood line. The flat valley bottom and long river bend make it possible to provide both upper and lower canoe launches.

Facilities at Steel Creek would include the ranger/information station, two residences, a maintenance area, a fire equipment storage shed, and a tertiary sewage treatment plant. Seasonal quarters would also be located here. One former residence would be utilized as a research laboratory.

Approximately 18 acres would be developed above the 100-year floodplain, and 8 acres would be utilized below the 100-year flood line for the canoe launch areas, a swimming area, and part of the carry-in campground.

Boxley Grist Mill

The Boxley grist mill site would include nearby tree-screened parking and restrooms. The mill would be interpreted only by signs. If determined feasible, the mill might be restored to operating condition; however, if it was placed in operation, it would have to be staffed.

ENVIRONMENTAL IMPACTS

Natural Environment

Vegetation and Wildlife. Some disturbance of vegetation and wildlife would occur during development of access roads, parking areas, buildings, sanitary facilities, and paths at Ponca, Lost Valley, the Boxley mill, and Steel Creek. Impacts might include soil erosion and compaction, destruction and trampling of vegetation, and disturbance of animal habitat. Approximately 32

acres would be disturbed by development, including 8 acres below the 100-year floodplain. With activities centered at Steel Creek, the natural setting there could sustain similar impacts from visitor use.

Air Quality. Air pollutants and noise would increase proportionately with increased traffic but would still be of minor significance. Traffic on gravel roads would contribute dust to the air.

Water Quality. Water quality would not be affected by sewage effluent, as all effluent would be treated in conformance with state and U.S. Public Health Service standards before being returned to the ground. A limited amount of soil would be washed into the river as a result of disturbance during construction and subsequent rains.

Aesthetic Quality. Access roads, parking areas, sanitary facilities, and pathways would be an intrusion on the natural and agricultural scene. Development would encourage additional visitor use, which would introduce more traffic, with resultant increases in noise and congestion in this generally quiet, pastoral valley.

The Steel Creek campground would be visible from the river at intermittent locations.

Cultural Environment

Making the historic resources more available to visitors would increase the potential for vandalism and wear, but limited staffing would help protect the resources. Access roads, parking areas, sanitary facilities, and pathways at the Boxley mill and historic Ponca residences would be an intrusion on the historic scene. The construction of roads and facilities might disturb as yet undiscovered archeological sites. Sites listed on the National Register of Historic Places would be affected both physically and aesthetically by construction and development.

Socioeconomic Environment

Local Businesses. Increased visitor use could be expected because of additional development, which would result in more demands for meals, lodging, rentals, and merchandise. There are no lodging or food service concessions planned in the Steel Creek-Lost Valley area; consequently, local businesses would be motivated to expand. Business expansion would provide more jobs and income for residents.

National river personnel and their families would require community services, especially schooling and medical services. These families would contribute increased revenue in the form of purchases and taxes.

Operations. Access roads and structures in the picnic area and campground floodplain would require additional maintenance work if they were inundated during floods. Construction of buildings on soils where limitations are severe might result in subsequent maintenance problems.

Visitor Use. Inundation of the canoe-launching areas and part of the camping area during floods would render them temporarily unusable. Flooding would make the river unsafe for canoeing.

Construction of the new Lost Valley entrance road would cause temporary vistor inconveniences. Moving the launching activities downstream from Ponca to Steel Creek has already reduced the conflicts between local motorists and people launching canoes at the Ponca bridge.

Interpretive services in the area would provide little personal contact.

Traffic Flow. Traffic per day (averaged on an annual basis) could increase from the current 150 to 190 vehicles to approximately 225 to 285 vehicles per day in five to ten years. Traffic in and near Ponca would increase.

MITIGATING MEASURES

Natural Environment

Most facilities would be located at Steel Creek, which would reduce the need for additional development at Lost Valley, thus preserving the natural setting there.

Proper design and supervision of construction activities would minimize disturbance of existing vegetation. Facilities would be screened by trees to reduce the visual impacts of development. Newly constructed road banks and old road scars would be revegetated, minimizing the potential for erosion and visual scars.

Cultural Environment

The parking areas and sanitary facilities at the Boxley mill and Villines farmstead would be screened by trees to reduce their intrusion on the historic scene.

Protective staff and limited interpretive personnel would supervise and monitor visitor use and would institute preventive measures to avoid damage to cultural resources wherever possible.

Construction areas would be thoroughly surveyed by a professional archeologist. Any significant archeological sites located in construction areas would be avoided, or mitigating actions taken. Any sites determined eligible for listing on the National Register of Historic Places would be nominated to the register, and mitigating actions would be developed in compliance with 36 CFR 800. Salvage excavations would be conducted only if there was no feasible alternative for location of the facilities.

The Boxley grist mill is currently listed on the national register. Before approval of any actions at this site, compliance with section 106 of the National Historic Preservation Act and its implementing procedures (36 CFR 800) would be accomplished.

Socioeconomic Environment

Special attention would be given to design details for buildings constructed in areas with severe soil limitations to eliminate possible maintenance problems.

All facilities located within a floodplain would be designed and constructed to withstand periodic inundation.

A rise in the water level, indicating an approaching flood, should provide sufficient warning to permit visitors in the floodplain to reach safety. An audible electronic warning system has been installed to offer additional warning for both protection personnel and visitors.

UNAVOIDABLE ADVERSE EFFECTS

Some disturbance of natural resources during facility construction would be unavoidable. There would also be limited site disturbance during road construction. Some soils would be washed into the river as a result of this construction, which would temporarily affect river water clarity. The roads and facilities that were established would be an intrusion on the natural and agricultural scene. Minor increases in air pollutants would result from increased traffic.

Although the intrusion of modern facilities on the historic scene would be partially mitigated by screening, there would be some unavoidable visual impacts. Vandalism and wear caused by additional visits to historic features could not be totally avoided.

Facilities in the floodplain would continue to be subject to minor damage during floods, requiring additional maintenance. Visitor circulation patterns would also be disrupted during floods, especially at the low-water bridge at Ponca. Some visitor inconveniences would occur during construction of the new entrance road. Additional traffic in the valley would result in some congestion on roads and in developed areas during heavy use periods.

SHORT-TERM/LONG-TERM RELATIONSHIPS

New operational facilities would aid staff in managing and protecting area resources. Facilities providing for visitors' recreational needs would help channel intensive uses away from sensitive resources and would contribute to resource protection--in line with the long-term goal of preservation for use by future generations--while serving visitor needs.

IRREVERSIBLE/IRRETRIEVABLE COMMITMENTS OF RESOURCES

No irreversible commitments are contemplated.

This alternative would commit the natural resources in the development zone to nonconsumptive recreational uses only. Money, material, and labor for construction would be irretrievably committed.

SUMMARY OF FACILITIES UNDER ALTERNATIVE B

LOST VALLEY	PONCA	STEEL CREEK	BOXLEY
Information exhibit Picnic area (15 sites) Parking (35 cars) with restrooms Residence Trail Community center (existing)	Historic buildings (existing) Parking (20 cars) with restrooms Trails	Canoe-launching sites (2) Swim beach Carry-in campground (80 sites) RV campground (35 sites) Amphitheater Picnic areas (2; 20 sites) with restrooms Information/ranger station Residences (2; 1 existing) and seasonal apartments Maintenance building Storage buildings (existing) Sewage treatment facilities	Historic building (existing) Parking (15 cars) with restrooms

COST ESTIMATES - ALTERNATIVE B

Lost Valley site	
Provide information exhibit	$ 6,000
Rehabilitate picnic sites (existing)	4,000
Construct parking area (35 spaces)	70,000
Construct comfort station	67,000
Upgrade utility systems	50,000
Construct residence (1)	76,000
Upgrade trail (1 1/4 miles)	25,000
Obliterate existing road (1/2 mile)	23,000
Construct entrance road (1/2 mile)	175,000
Subtotal	$ 496,000
Ponca site	
Construct parking area (20 spaces)	$ 41,000
Construct comfort station	76,000
Upgrade utility systems	50,000
Provide trail signing	3,000
Rehabilitate Villines farmstead historic area	301,000
Subtotal	$ 471,000
Steel Creek site	
Provide canoe launch signing (2 areas)	$ 3,000
Establish swim beach	9,000
Construct carry-in campground (80 sites)	88,000
Construct RV campground (35 sites)	58,000
Construct picnic areas (20 sites at 2 areas)	34,000
Construct comfort stations (3)	225,000
Construct amphitheater (200 seats)	100,000
Construct information/ranger station	150,000
Construct residence (1)	76,000
Construct seasonal apartments	250,000
Construct maintenance/storage building (2,000 s.f.)	166,000
Construct water system	250,000
Construct sewage system	416,000
Construct parking area (423 spaces; 150 floater spaces on grass near launching site)	583,000
Subtotal	$2,408,000
Boxley mill site	
Stabilize/restore mill	$ 166,000
Construct comfort station	76,000
Construct utility systems	55,000
Construct parking area (15 spaces)	31,000
Construct access road (300 l.f.)	29,000
Subtotal	$ 357,000
Total Gross Cost	$3,732,000

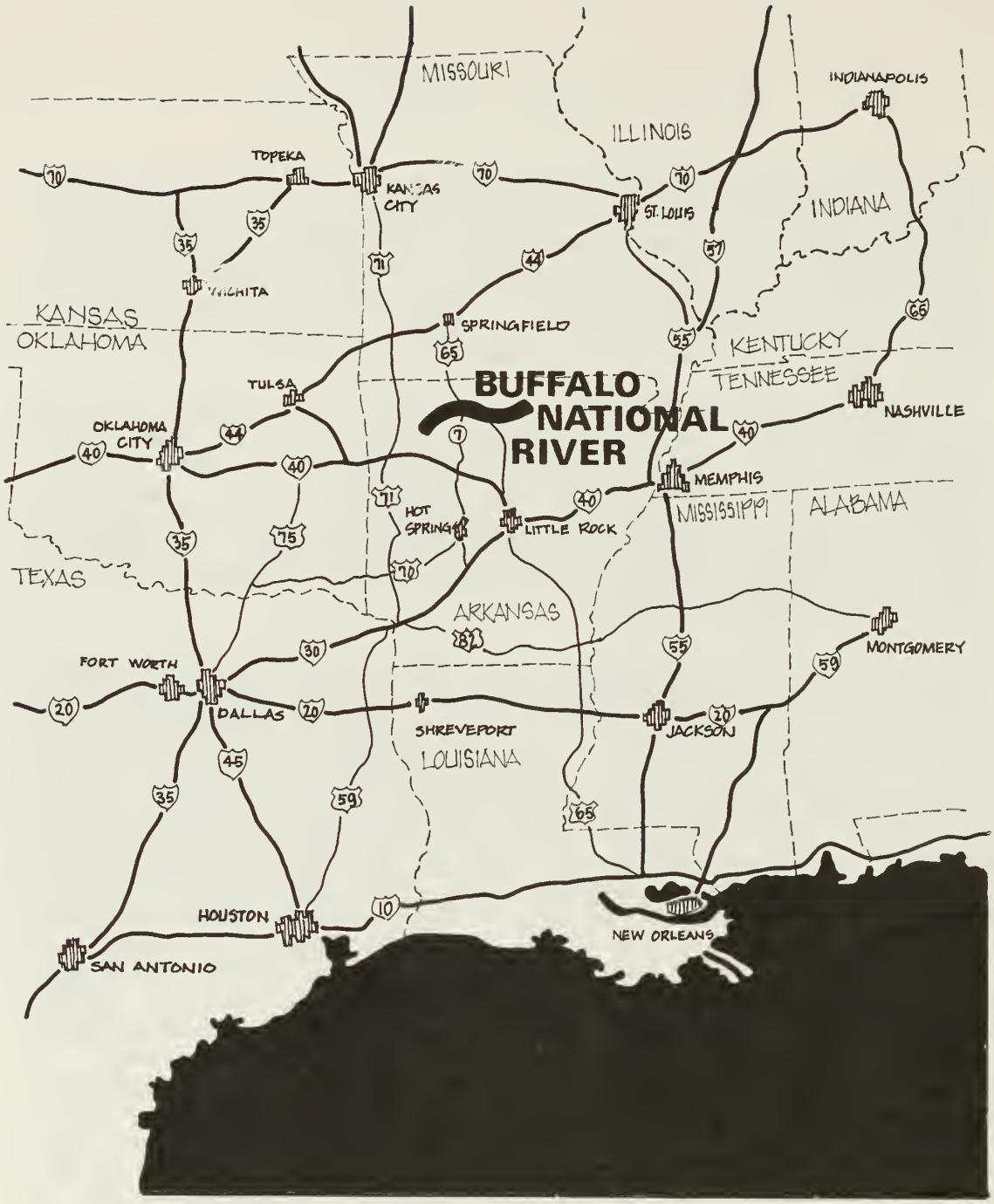
description of the environment

REGIONAL SETTING

Lost Valley, Ponca, and Steel Creek are located at the upper end of Buffalo National River in the Ozark Mountains of northwestern Arkansas, about 26 miles southwest of the town of Harrison. The river originates in Ozark National Forest, flows northeast across the national river boundary, down past Lost Valley, Ponca, and Steel Creek in the headwaters county of Newton, and then east through Searcy, Marion, and Baxter counties to empty into the White River.

The Ozark region is a land of many rivers. The largest of them have been dammed and their valleys inundated, providing ample opportunity for reservoir-based recreation in the region. Recreation on the remaining free-flowing rivers is especially popular. There are several other floatable rivers besides the Buffalo, although they are shorter in floatable length. The Buffalo River is 132 miles long within the national river boundary, all but 6 miles of it floatable in season.

The Ozarks area is a popular recreation destination, with many reservoirs providing lake-based activities. Arkansas state parks in the region include Devil's Den, Withrow Spring, Bull Shoals, and Ozark Folk Culture Center. The U.S. Forest Service administers Ozark National Forest and Blanchard Springs Caverns. Other National Park Service areas in a 100-mile radius include George Washington Carver National Monument (Missouri), Wilson's Creek National Battlefield (Missouri), Pea Ridge National Military Park (Arkansas), Hot Springs National Park (Arkansas), and Fort Smith National Historic Site (Arkansas). The Arkansas Game and Fish Commission manages 17,480 acres of wildlife lands in Newton and Searcy counties, none close to Steel Creek-Lost Valley. Privately owned facilities serving tourists include caves, resorts, theme parks, lodges, restaurants, motels, fishing facilities, boat rentals, service stations, gift shops, and other recreation attractions. A privately owned 700-acre theme park, Dogpatch USA, located 4 miles north of Pruitt on Arkansas 7 just outside the national river boundary, attracted 600,000 visitors in 1975. Dogpatch USA has numerous exhibits and attractions, which include 126 lodging units, a 100-unit motel, a 600-person capacity restaurant, and a 1,200-person capacity convention center completed in 1973.



REGION

Buffalo National River, Arkansas

United States Department of the Interior / National Park Service

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STEEL CREEK-LOST VALLEY

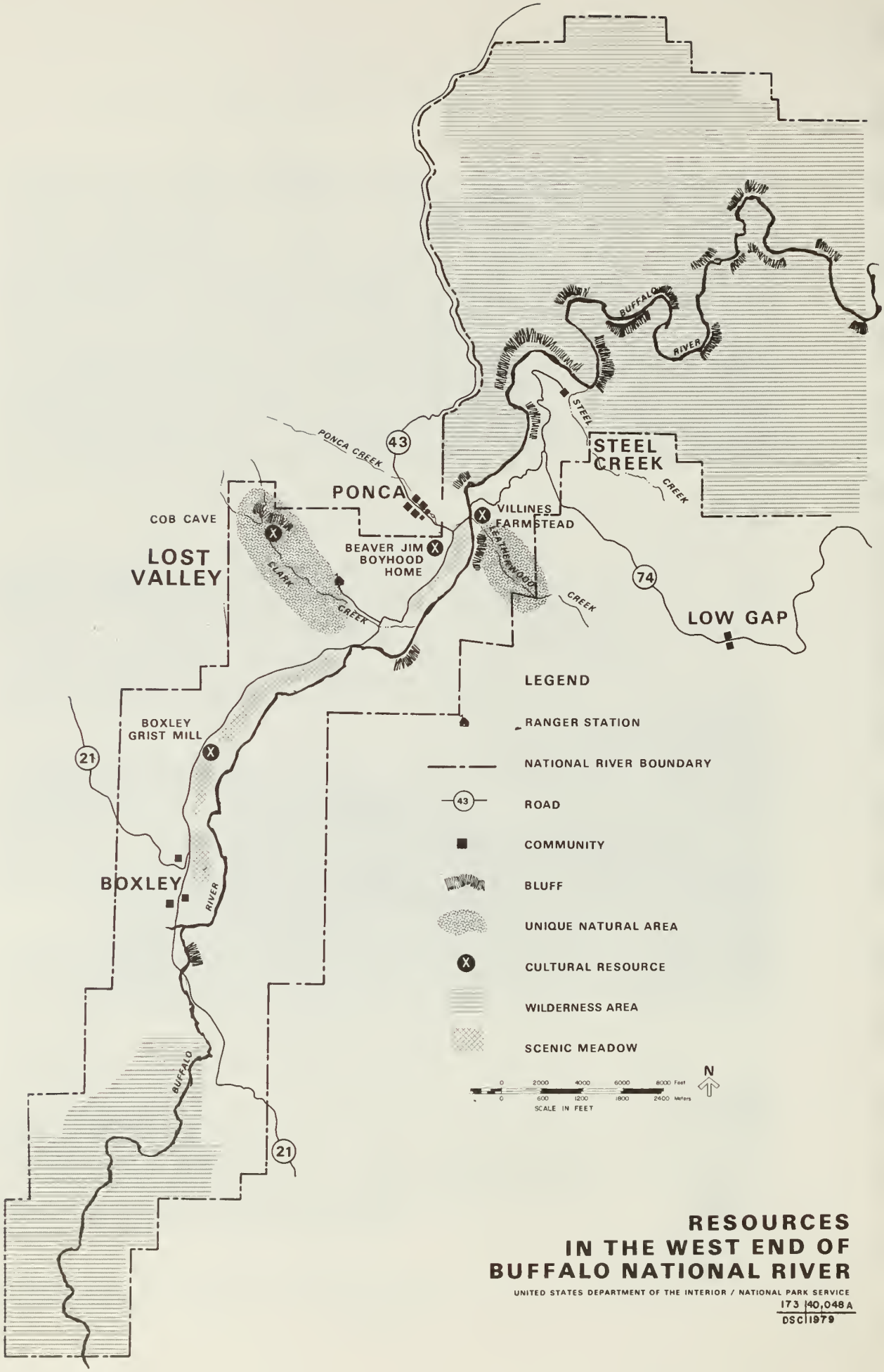
The Buffalo River begins in Ozark National Forest at an elevation of 2,561 feet. At its headwaters the river is small, with a steep gradient; it drops 1,300 vertical feet in 16 miles before it enters the national river boundary. As the river flows from the boundary to Boxley Bridge (5 miles), it drops approximately 23 feet per mile and is so small and rocky that only very experienced canoeists can safely float the area. This uppermost section of the national river is mostly forested and very hilly. From Boxley Bridge to the Ponca bridge within the Steel Creek-Lost Valley area, the gradient is 16 feet per mile; this portion of the river (6 miles) is occasionally floated in spring. The Boxley valley on the main river is mostly pastoral land. It has been designated in the Master Plan as a private use zone where the agricultural scene will be preserved.

EXISTING RESOURCES

The westernmost (upstream) feature in the Steel Creek-Lost Valley area is the historic Boxley grist mill, located about a mile downstream from the town of Boxley. This mill has not been operated since 1950, but prior to that time it was used for 80 years to grind grain for the local community. The building is in relatively good condition, is the only grist mill still standing in the northwest section of Arkansas, and is listed on the National Register of Historic Places.

Clark Creek is a small tributary that enters the Buffalo River a mile below the Boxley grist mill. Lost Valley lies along this tributary. The valley has significant natural and scenic values. It is quite narrow and is forested except for the vertical cliffs that edge it, the highest of which rises approximately 400 feet above the streambed. The mouth of the valley is a broad, gently sloping area with meadows interrupted by occasional rows of trees.

Access to Lost Valley is along Arkansas 43 paralleling the Buffalo River and then along a 1/4-mile graded road into the site. Developable area, situated at the mouth of the valley between an existing ranger station and the Buffalo River 100-year flood line, is approximately 43 acres. Six acres currently support park facilities, farm buildings, and roads; 22 acres are cleared for agricultural use; and the remaining 15 acres are in natural vegetation. Facilities (in the former Lost Valley State Park) include a campground, a picnic area, a parking area, vault toilets, well water, a hiking trail, and the ranger station, which also serves as a residence. The Beechwood community center and cemetery are located on the north side of the mouth of the valley.



RESOURCES IN THE WEST END OF BUFFALO NATIONAL RIVER

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE
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The Ponca area is 1 1/2 miles downstream from Lost Valley. Because of its easy accessibility, it has traditionally been a popular canoe-launching site in the spring. Two tributary streams enter the Buffalo near Ponca: Ponca Creek, which flows through the community of Ponca, enters from the west; Leatherwood Creek, which drains a steep-sided north-facing valley that has an excellent display of unusual flora, enters from the southeast.

Facilities in the Ponca area consist of the paved road and low-water bridge. The historic Villines farmstead is located just beyond the east end of the bridge, and the Beaver Jim boyhood home is located 1/4 mile west of the bridge near the junction of Arkansas 74 and 43. Another 1,000 feet west is the boundary of the national river.

The community of Ponca, just west of the national river boundary, is an unincorporated town with no common water or sewer systems. It includes a small grocery store, several canoe rental businesses, a restaurant, and a lodge. These establishments are small, are open seasonally, and serve the local community as well as tourists.

Downstream from the Ponca bridge, the Buffalo River valley narrows and there are frequent spectacular vertical bluffs. From Steel Creek to Kyle's Landing, a distance of 9 miles, the gradient is 12 1/2 feet per mile.

Steel Creek, a former horse ranch, is located 1 1/2 miles downstream from the Ponca bridge (3 miles by road). The ranch is located in a meadow on the south side of the river; the opposite bank is a vertical bluff 300 feet high. Beginning 1/4 mile downstream from the Ponca bridge, the north side of the river is designated the Ponca Wilderness Area (11,300 acres). This section of the Buffalo is noted for its white-water canoeing. Its hazards and challenges are especially enticing to college-age people. One of the challenging spots, called "wrecking rock," is located between the two canoe-launching sites at Steel Creek.

Steel Creek development consists of a residence, a ranger office, a cooperative research center, a garage, a storage shed, a stable, and two machine shops. These buildings stand above the 100-year floodplain.

Sewage at Lost Valley and Steel Creek is handled by septic tanks and vault toilets. These methods are only marginally acceptable during heavy use periods and will be inadequate if use increases. Solid waste is disposed of under contract in approved landfills. Electricity is provided by Carroll Electric Cooperative, Inc. Wells at Steel Creek will accommodate future needs, but the well at Lost Valley will not be adequate if there are any increases in use.

Arkansas 43 and 74 provide access to the Steel Creek-Lost Valley area. Arkansas 74 was paved in 1978, and Arkansas 43 is currently being paved. Arkansas 74 crosses the Buffalo River in the Ponca area on a concrete single-lane bridge; its roadbed is approximately 2 feet above the river surface during normal springtime high water. During floods the bridge is usually inundated for two or three days. Arkansas 43 and 21 (in the upper Buffalo River valley) afford visitors one of the few scenic drives along the valley bottom parallel to the river.

The Arkansas Highway Commission has improved Arkansas 43 from Ponca to Boxley--including paving, some realigning, and adding fill in certain locations to bring the roadbed above the 100-year flood level. A long-range improvement project by the commission is to replace the low-water bridge across the Buffalo River with a bridge above the 100-year flood level.

VISITATION AND USE

No public transportation serves the Steel Creek-Lost Valley area. All visitors currently arrive in private vehicles, and this situation is expected to continue. Traffic flow is light. On an annual basis, average 24-hour use varies from 190 vehicles at Boxley to 150 vehicles at the Ponca bridge, as shown in the Traffic Flow diagram. The paving of Arkasas 43 and 74 will probably encourage increased traffic in the area.

Camping, picnicking, and hiking are currently the most popular activities at Lost Valley. Use is moderate in the spring and summer and lighter the rest of the year. Spring use is particularly heavy on weekends because river floaters frequently camp for one night before starting on a float trip.

Canoeing is the primary activity in the Steel Creek and Ponca areas. There is little canoeing during the winter months, but beginning in March, a great increase in this activity takes place and continues through April and May, the heaviest use months. June is a busy month in wet years; however, in most years use decreases in June and becomes minimal by July. Canoeing use is light from July to February. A factor important in planning is that the use patterns of floaters are such that either their cars need to be shuttled to their trip destination or they need to be shuttled back to their cars.

Few pools are deep enough for swimming in the summer; however, local residents frequently swim in the Ponca and Steel Creek areas. Fishing is also quite popular.

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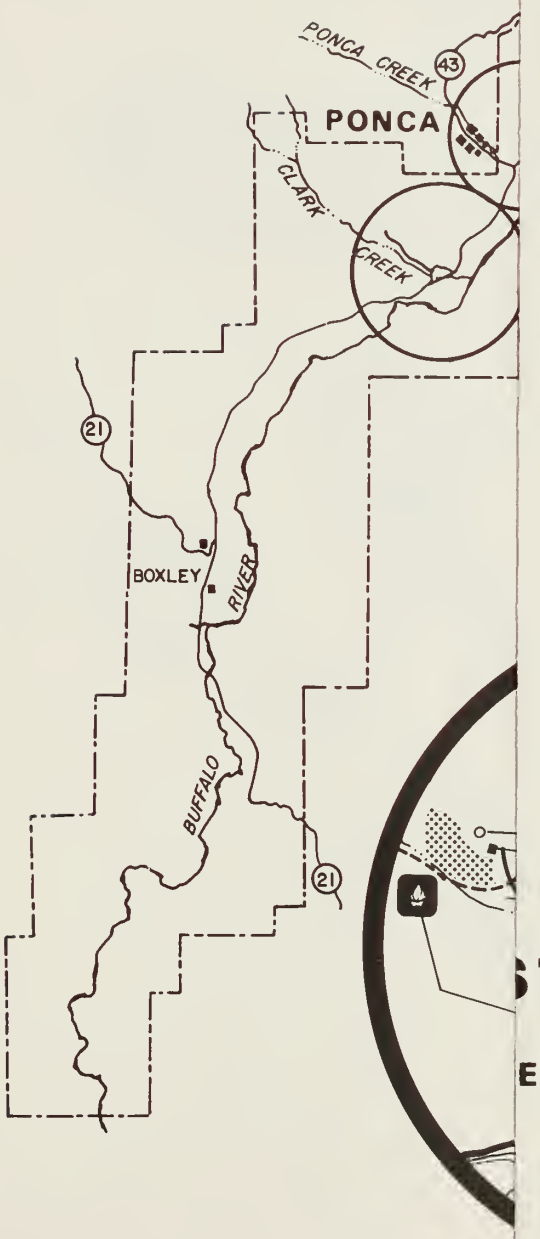

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EL CREEK – PONCA – LOST VALLEY

BUFFALO NATIONAL RIVER

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE

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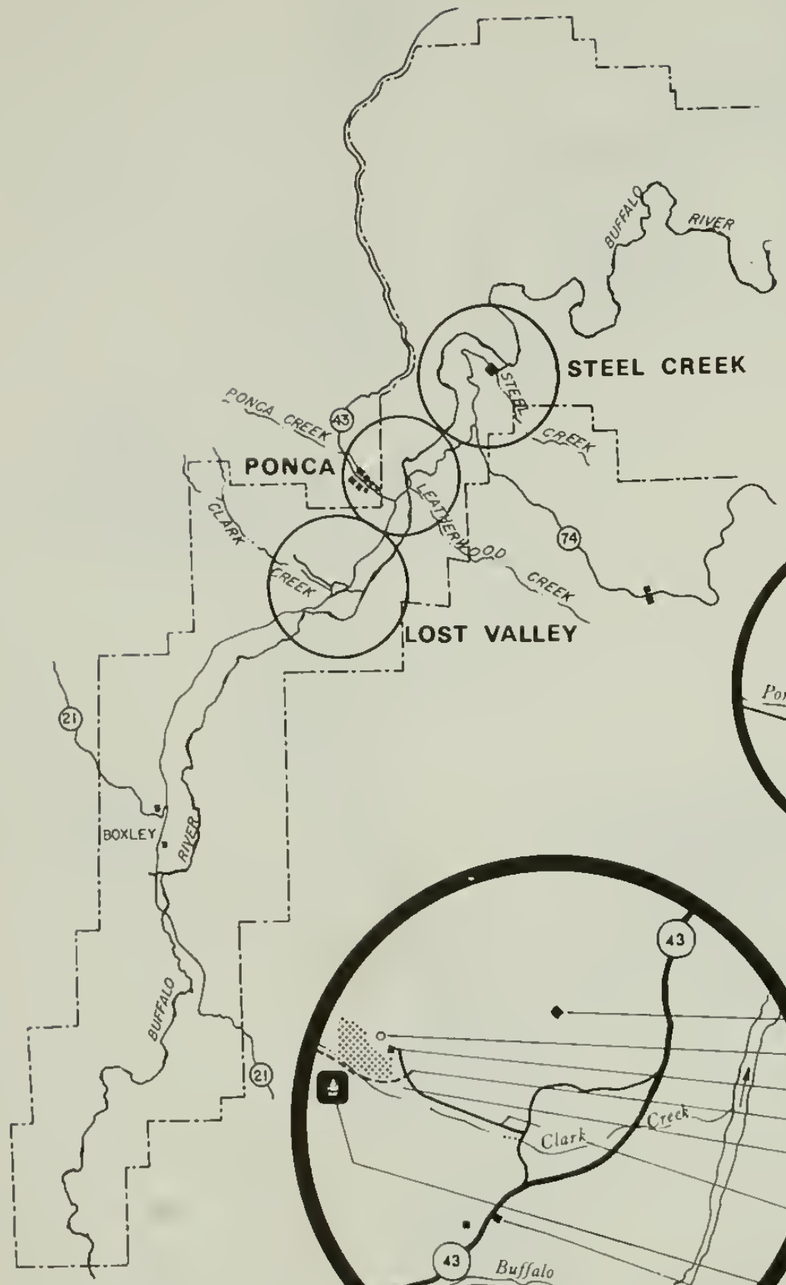
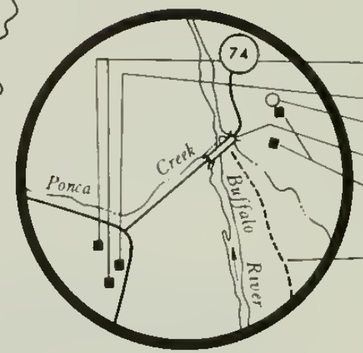
STEEL CREEK

- FLOATER CAMPING
- CANOE LAUNCHING
- WELLS
- 2 RESIDENCES
- WORKSHOPS
- GARAGE
- STABLES & OFFICE
- EXISTING POWER & TELEPHONE SERVICE
- GRAVEL ACCESS ROAD





PONCA

- RESIDENCE & FARM BUILDINGS
- BEAVER JIM BOYHOOD HOME (HISTORIC)
- WELL
- LOW-WATER BRIDGE
- VILLINES FARMSTEAD (HISTORIC)
- HIKING TRAIL (OLD JEEP ROAD)

LOST VALLEY

- BEECHWOOD COMMUNITY CENTER & CEMETERY
- WELL
- RANGER STATION/RESIDENCE
- HIKING TRAIL
- CAMPGROUND: 15 SITES WITH TABLES,
- PARKING AREA, PIT TOILETS & WATER SUPPLY
- GRAVEL ACCESS ROAD
- EXISTING POWER & TELEPHONE SERVICE
- CAMPFIRE CIRCLE
- RESIDENCE & FARM BUILDINGS (PRIVATE OWNERSHIP)

N

Feet	1000	0	1000	2000
Meters	300	0	300	600

existing conditions

STEEL CREEK — PONCA — LOST VALLEY

BUFFALO NATIONAL RIVER

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE

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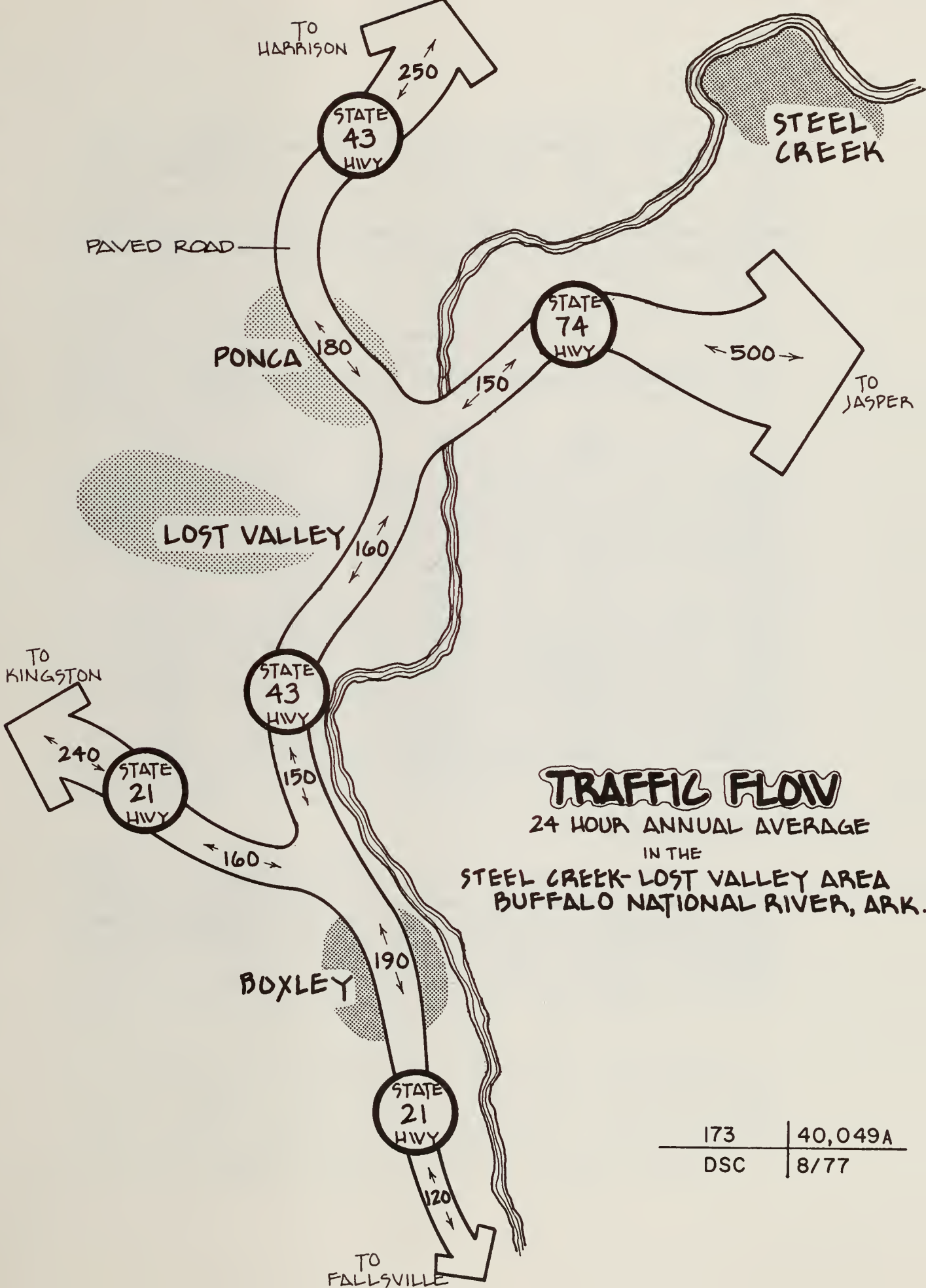
TO HARRISON
250
STATE 43 HWY
STEEL CREEK
PAVED ROAD
STATE 74 HWY
500
TO JASPER
PONCA
180
150
LOST VALLEY
160
TO KINGSTON
STATE 43 HWY
240
STATE 21 HWY
150
160
190
BOXLEY
STATE 21 HWY
120
TO FALLSVILLE
TRAFFIC FLOW
24 HOUR ANNUAL AVERAGE
IN THE
STEEL CREEK- LOST VALLEY AREA
BUFFALO NATIONAL RIVER, ARK.
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Annual visits to Lost Valley have continued to increase since the state park was transferred to the National Park Service in 1973. Steel Creek has been under National Park Service operation since 1976, so fewer visitor statistics are available. The heaviest use periods are spring and summer. The following figures indicate monthly and annual visits to all sites within the Pruitt district, but they primarily reflect use in the Steel Creek-Lost Valley area.

Table 1

MONTHLY/ANNUAL VISITS - PRUITT DISTRICT

	1976	1977	1978	1979
Annual Total	_____	74,387	79,409	80,718
January	--	505	967	422
February	--	1,071	918	950
March	--	6,282	7,500	8,340
April	--	12,719	12,648	13,100
May	--	6,367	13,139	14,121
June	5,219*	8,247	9,013	9,346
July	4,917*	12,500	10,650	10,780
August	5,026*	9,614	6,010	7,275
September	4,250	3,469	5,000	5,490
October	6,371	7,708	7,829	6,371
November	3,493	4,257	3,639	2,443
December	1,250	1,648	2,066	2,080

*Lost Valley only

Over 100 million people live within a 250-mile radius of Buffalo National River. Visitation trends will continue to be directly affected by gasoline availability and general economic stability, since travel patterns here are closely related to use of the private automobile.

NATURAL ENVIRONMENT

CLIMATE

The climate of Buffalo River is pleasant and temperate. The average annual temperature is about 58 degrees Fahrenheit, and the average day/night temperature differential is 29 degrees. Summers are long and warm, with July temperatures averaging about 80 degrees. The frost-free season averages 199 days. Severe winter temperatures are rare, although freezing may occur from late October to late March. January temperatures average about 40 degrees. Temperature extremes of 114 degrees to -23 degrees have been recorded within the basin. Winter and summer are separated by distinct spring and fall seasons.

The area is semihumid. Average annual precipitation is 49 inches; it is distributed relatively uniformly throughout the year, although the spring months receive slightly more. Records dating back to 1900 show that the greatest annual precipitation was 82 inches in 1927, and the least was 30 inches in 1901. Snowfall averages 12 inches a year and may occur from November through March.

Prevailing winds are moderate and come from the south and southwest. Drought conditions, common in the Great Plains to the west of the Ozarks, frequently extend into the basin and affect streamflow and plant life. The Buffalo River basin lies in a region characterized by the occurrence of moderately intense local storms and general storms that have somewhat heavier rainfall and last several days. The larger storms occur most frequently in spring; however, records show that they can happen any time of the year. Tornadic winds occur frequently in spring and less frequently in summer and fall.

GEOLOGY/TOPOGRAPHY/SOILS

The river's geologic features illustrate the complicated story of the building and erosion of the Ozark dome. The area exposes many types of rocks in horizontal layers, innumerable fossils, ancient peneplains, prominent escarpments, caves, arches and sinks, canyons, and solution valleys. The main river bed is relatively stable, although the channel does vary within gravel and boulder deposits that overlie the solid rock floor.

The principal mineral deposits are lead and zinc. Other minerals in the four national river counties (Newton, Searcy, Marion, and Baxter) include tripoli, manganese, pyrite, uranium, marble, copper, fuller's earth, and phosphate rock. Ore deposits are related to the underlying igneous intrusions. Lead and zinc occur primarily in zones of shattering near faults, notably grabens.

Limestone and sandstone are widely distributed. Long-term mining operations appear to have been limited to limestone, aggregate, sand and gravel, lead and zinc, and crushed stone. The lead mines near Ponca ceased operation years ago. Lands within the boundary were withdrawn from mining when Buffalo National River was established in March 1972. There is no current mining or exploration activity.

Slope analyses for Ponca and Lost Valley are shown on the following maps. Slopes of 0 to 2 percent are most suitable for development, but design must take into consideration the possiblity of some poor drainage areas. Slopes of 2 to 7 percent are also suitable for building permanent structures, given the same potential constraints. Slopes 7 to 15 percent can be adapted for development, although impacts such as larger cuts and fills are generally greater. Slopes over 15 percent present severe difficulties for permanent development.

Soil limitations for development in the general river valley are classified as severe. In general, these limitations include slope, depth of soil, drainage characteristics, and other relevant factors. The general soil association is Clarksville-Nixa-Baxter, which is a deep to moderately deep, medium-textured cherty soil. All formations are of sedimentary origin and consist mainly of limestones and dolomites with occasional beds of shale, sandstone, and chert. Most soils are well drained.

VEGETATION

Diverse vegetation grows along the Buffalo River within the dominant oak/hickory forest association. Topography varies from streambanks to bluffs, providing different exposure, soils, and microclimates for 1,500 species of plants.

Six species of oak and three species of hickory predominate in the Buffalo watershed. White, black, blackjack, chinkapin, post, and northern red oaks are abundant, and mockernut, black, and shagbark hickories are well represented. Also present are such trees as winged elm, red maple, sassafras, sycamore, persimmon, walnut, hackberry, black gum, shortleaf pine, red cedar, and sweetgum. The upper part of Lost Valley contains a rich oak/hickory/beech forest. There are over 40 woody species in the Lost Valley, Steel Creek, and Ponca areas.

The great variety of microenvironments in the Ozarks has encouraged the survival of many relict species from times when different local climates prevailed. Several trees are considered unique, and two are considered rare in the Buffalo National River area. The two rare trees are Ashe's juniper (Juniperus ashei) and

LEGEND

- NONMAINTAINED PATH
- MAINTAINED GRAVEL ROAD
- PAVED ROAD
- 2–7% SLOPE
- 7–15% SLOPE
- 15%–UP SLOPE

N

0 200 400 600 800

SCALE IN FEET

SLOPE ANALYSIS

LOST VALLEY

BUFFALO NATIONAL RIVER, ARKANSAS

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LEGEND

- NONMAINTAINED PATH
- MAINTAINED GRAVEL ROAD
- PAVED ROAD
- 2–7% SLOPE
- 7–15% SLOPE
- 15%–UP SLOPE

N

0 200 400 600 800

SCALE IN FEET

SLOPE ANALYSIS

LOST VALLEY

BUFFALO NATIONAL RIVER, ARKANSAS

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE

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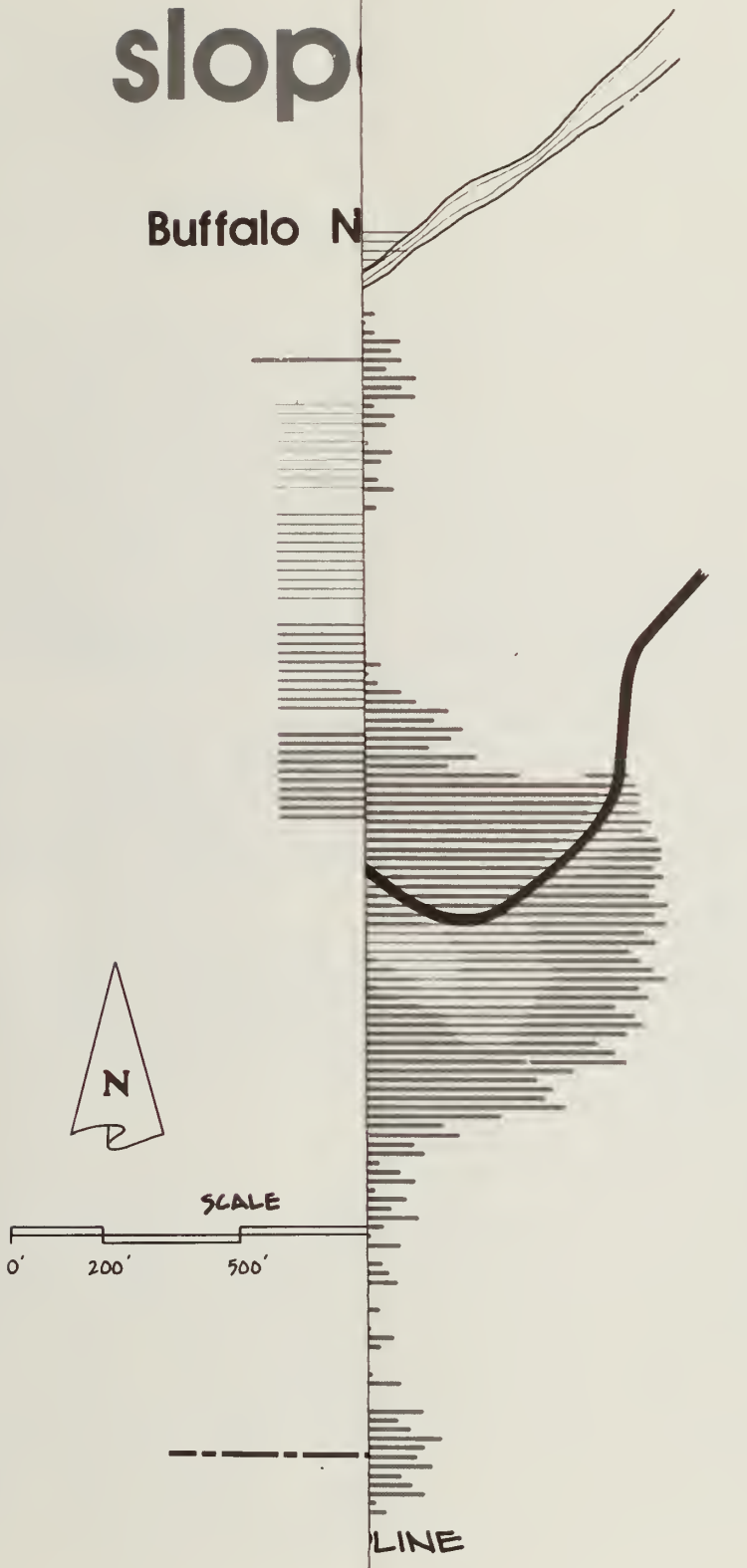
slop

Buffalo N



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slope analysis

ponca

Buffalo National River, Arkansas

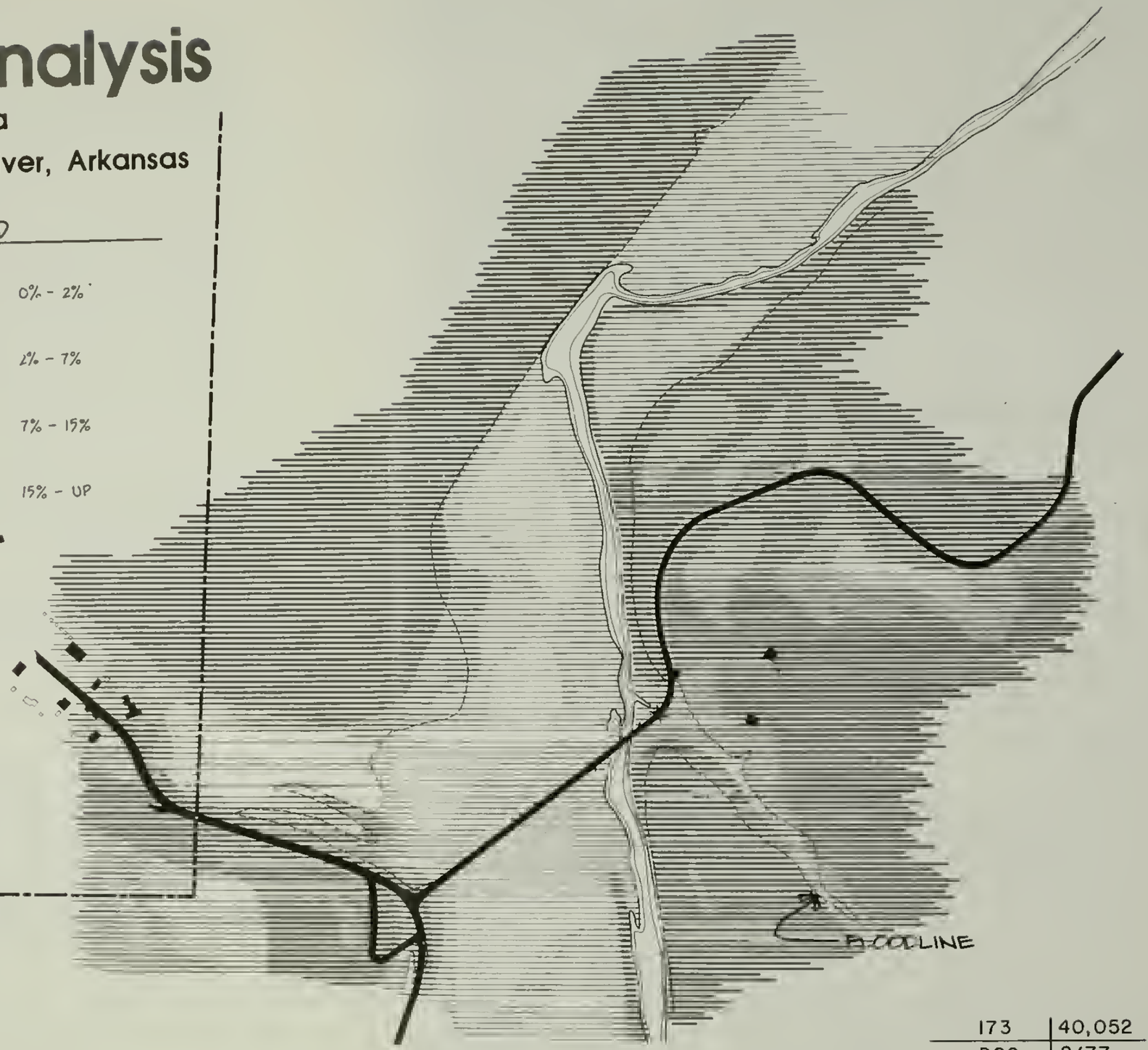
LEGEND

0% - 2%

2% - 7%

7% - 15%

15% - UP



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American smoke tree (Cotinus obovatus). The unique tree species are yellowwood (Cladrastis lutea)--relatively uncommon; cucumber magnolia (Magnolia acuminata) and white oak (Quercus alba)--at the western extremity of their native ranges; witch hazel (Hammamelis vernalis)--endemic to the Ozarks and found near the river at Ponca; and speckled alder (Alnus rugosa)--at the southern extremity of its range. There are no known endangered tree species in the development area.

The Arkansas alum-root (Heuchera arkansana) is endemic to the Arkansas Ozarks, and one of its local sites is in the streambed of Clark Creek about 1/4 mile upstream from the Lost Valley campground. A few other herbaceous species that are endemic or are at the extremities of their range have been located in the upper Buffalo River; these are listed in appendix B. The University of Arkansas has studied the national river area and has identified several species deserving special protection. Of these, Carex careyana and Carex jamesii are found on Leatherwood Creek, approximately 1 mile from Arkansas 74, and Phlox bifida var. bifida and Lithospermum latifolium are found in Lost Valley. None of these plants is near the proposed development sites.

Azalea, redbud, serviceberry, and dogwood are spectacular in spring and early summer, as is the deciduous forest during fall color. So-called "fern falls" occur on the cooler, moister north-facing slopes. These cascades of ferns blanketing a precipitous, treeless incline appear from a distance to be a green-tinted waterfall.

The Wooded Area maps for Lost Valley, Ponca, and Steel Creek sites indicate forested lands by gray-shaded areas. Most of the cleared areas were opened historically for agricultural purposes and have been maintained in that condition.

WILDLIFE

Animal life in the Arkansas Ozarks is representative of the deciduous forest biome and its rivers, but is more diversified because of the presence of endemic species and western faunal elements. Some animals have been extirpated from the region, such as the timber wolf, elk, and bison. The status of the red wolf is unclear, but it is probably absent from the Buffalo River area. It is classified as threatened in the 1973 publication "Threatened Wildlife of the United States" of the Bureau of Sport Fisheries and Wildlife (now the U.S. Fish and Wildlife Service). The status of several rare species (such as the long-nose darter, blue-striped darter, and grotto salamander) is unknown.

The only animals on the federal endangered species list that are thought to be present near the development area are the gray bat (Myotis grisescans) and the Indiana bat (Myotis sodalis). The gray bat is believed to have formed a colony in Eden Falls Cave at the upper end of the Lost Valley hiking trail. This site is over a mile from the parking/camping area at Lost Valley. If the bats' residence within the vicinity is confirmed, a biological assessment, in compliance with section 7 of the Endangered Species Act, will be completed before a final decision is made regarding development and use.

With the disappearance of the red wolf when the deciduous forest was cleared for open farming, the coyote increased and extended its range. Coyotes, along with white-tailed deer and bobcats, are the largest native animals seen frequently in the area today. The mountain lion and black bear may also be present in small numbers. Black bear, transplanted in the early 1960s from Minnesota and Manitoba to the Ozark National Forest, have now been reported along the upper Buffalo River. Aquatic fur-bearing animals--beaver, otter, mink, and muskrat--are found along the entire river.

Ornithologists have reported over 250 species of birds, many of them common throughout the year. Pileated woodpeckers are fairly common and bald eagles are occasionally seen. Wild turkeys have been reintroduced into the area. Many species of water birds are seen on the river during spring and fall migrations.

The Buffalo River's principal game fish is the smallmouth bass. Also present are largemouth bass, spotted black bass, rock bass, walleye, sucker, catfish, bluegill, green perch, and sunfish. There are no trout because the river's waters are too warm for this species except in the outflows near larger springs. Unusual fish species include the studfish, chestnut lamprey, darter, and gar.

AIR QUALITY

Air quality in scenic areas is judged not so much by its chemical aspects as by its clarity, because clarity affects the visual experience. Because the Buffalo River drains a rural region with few city or industrial sources of pollutants, and because frequent rains clear the sky, the air remains generally clear. Two sawmills do generate some smoke in the Boxley valley area. Motor vehicles on the roads introduce minor amounts of air pollution. Landowners practice occasional burning to maintain and clear agricultural areas. Campfires from the Lost Valley campground occasionally add heavy smoke to the air.

LEGEND

- NONMAINTAINED PATH
- MAINTAINED GRAVEL ROAD
- PAVED ROAD
- WOODED AREA

N

0 200 400 600 800

SCALE IN FEET

WOODED AREA

LOST VALLEY

BUFFALO NATIONAL RIVER, ARKANSAS

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE

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LEGEND

- NONMAINTAINED PATH
- MAINTAINED GRAVEL ROAD
- PAVED ROAD
- WOODED AREA

N

0 200 400 600 800

SCALE IN FEET

WOODED AREA

LOST VALLEY

BUFFALO NATIONAL RIVER, ARKANSAS

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE

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wooded area

ponca

Buffalo National River, Arkansas

UNITED STATES DEPART 'NT OF THE INTERIOR

NATIONAL PA SERVICE

LEGEND

WOODED AREA

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WOODED AREA

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SCALE IN FEET

ooded area

STEEL CREEK

BUFFALO NATIONAL RIVER

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WOODED AREA

N

0 200 400 600 800

SCALE IN FEET

wooded area

STEEL CREEK

BUFFALO NATIONAL RIVER

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE

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HYDROLOGY AND WATER QUALITY

Floods are frequent on the Buffalo River and can happen any time of the year. In this upper stretch of the river, the 100-year flood line is approximately 25 feet above normal river level. The floodplain covers most of the level valley bottom. Storms that produced major floods in the basin occurred in August 1915; April, June, and December 1927; February, March, April, and June 1945; and November 1973.

Late summer and early fall are characterized by greatly reduced streamflows. This pattern is common in all years, but it is more pronounced during drought years. The upper half of the Buffalo River cannot be floated at such times. Generally, the entire river is floatable from October until the end of May or early June. Except for extremely dry periods, the lower half of the river can be floated almost any time.

During dry periods the stream may disappear in some locations into a bed of gravel and reappear downstream; therefore, the river appears to be dry in some areas when substantial subsurface flow is actually present.

Based on water quality analysis during the period from 1973 to 1977, the Buffalo River was considered unpolluted, except by silt during periods of heavy runoff. Water quality was good, but it was not completely pure. Analysis in recent years indicates very little significant change in water quality. Although surrounding agricultural lands are annually fertilized with nitrogen, phosphorus, and potassium in approximately a 10-20-10 ratio, nutrient concentrations remain relatively low.

Waterflow from wells at potential development sites varies but is generally adequate for supplying the expected demand. All sites that were drilled showed the quality to be excellent; water will require very little or no treatment. The approximate producing flow for specific sites is as follows:

Lost Valley - 10 gal/min
Villines farmstead - 40 gal/min
Steel Creek, near bottom of hill and near entrance road - 35 gal/min
Steel Creek, residence - 30 gal/min

CULTURAL ENVIRONMENT

PREHISTORY

The earliest evidence of humans in the Buffalo River area links prehistoric man to the Archaic stage (8,000-500 B.C.). Archaic man depended on hunting and gathering nuts and seeds for his livelihood. He hunted with a spear propelled by a spear thrower or atlatl and lived in the caves and rockshelters along the bluffs of the river and its tributaries. Because of his primitive habitation, Archaic man has been labeled the "Ozark bluff dweller." During the Woodland period (500 B.C.-A.D. 700), in the regions east of the Ozarks, pottery was developed and burial mounds began to appear. Simultaneously, an extensive trading system evolved throughout the eastern United States. In the Arkansas Ozarks, however, the Woodland period was of only minor significance. Burial mounds were never introduced, and pottery was used only sparingly--possibly because the bluff dwellers were skillful in the art of weaving. Furthermore, the Ozark Indians did not take an active role in the trading that characterized this period.

The impact of other cultures on the inhabitants of the Buffalo River region continued to be minimal during the Mississippian period (A.D. 700 to 1541). During this period, temple mounds, shell-tempered pottery, large villages, and an increased dependence on agriculture characterized aboriginal life in the middle Mississippi Valley and in the eastern United States. In addition, the bow and arrow increasingly replaced the atlatl. But in the Ozarks this period was marked only by a shift from woven baskets to shell-tempered pottery and the substitution of the bow and arrow for the atlatl. Although the Ozark Indians were seemingly sheltered, primarily by the Ozark Plateau itself, evidence indicates that cultural influences were advancing westward from the White River in the latter stages of the Mississippian period. What these bluff-dwelling Indians might have become and what cultural heights they might have reached must remain in the realm of conjecture, because in 1541 the Europeans arrived.

HISTORY

The exact route of the Spanish expedition led by Hernando de Soto remains a controversy. However, de Soto seems to have been the only Spaniard to enter the region and explore the Buffalo River--and he was quite possibly the only European, because French traders and explorers chose to skirt the Ozark Plateau by traveling the Mississippi River or traversing the Great Plains.

The Arkansas Ozark region remained a primitive area until the 19th century, when it became the site of both Indian and white migrations. As Americans began to move westward, they forced the Indians to relocate. Among those tribes who moved were the Cherokee, who inhabited areas in present Tennessee, Georgia, and the Carolinas at the time of European contact. By 1820 about a third of the tribe had signed treaties in which they exchanged the land they occupied for a strip of land between the White and Arkansas rivers in present northern Arkansas. In 1828 the American frontier again caught up with these Cherokee, and in that year they ceded their Arkansas reservation and moved to what is now northeast Oklahoma. Northwest Arkansas was then ready for the immigration of the white man.

Settlement was scattered and sparse between 1820 and the Civil War. Farming was the predominant occupation in that frontier region. It was during this early period of Arkansas history that the three of the four counties that compose the Buffalo River watershed were established: Searcy, 1835; Marion, 1836; and Newton, 1842. Although the population of the area increased during the 1850s, by the eve of the Civil War the Buffalo River country remained a sparsely settled and remote area. The 1860 census revealed that the total population for the three-county area was 14,470. Jasper, the county seat of Newton County, had a total population of 80 persons.

On March 6, 1861, Arkansas formally seceded from the United States and two weeks later was admitted to the Confederacy. However, not every part of the state concurred in the decision. Northwest Arkansas harbored deep political and emotional bonds with the Union. The Arkansas Peace Society was organized and throughout the conflict it supported the northern effort. Although no major battle took place on the Buffalo River during the war, a number of skirmishes occurred in the Boxley valley, at the mouth of Richland Creek, on the Buffalo River south of Yellville, and at various other locations along the river. In most of the encounters the Union troops were victorious, and they remained in control of the region for the duration of the war. The most significant result of the conflict in the Ozarks was that a large number of potential settlers became aware of the availability of land along the Buffalo River.

After the war the population of the counties bordering the Buffalo River grew steadily. Frontier farmers, predominantly from Missouri and Tennessee, homesteaded up and down the river seeking the most fertile lands. Most took advantage of the Homestead Law of 1862, which provided that any citizen could register claim to 160 acres, and after providing proof that he had lived on the land or cultivated it for a period of five years, he could receive title to the quarter section for a nominal fee. But a substantial number of

settlers simply took up residence on a tract of land without filing the proper documents with the authorities, and as a result many parcels of land changed hands several times before being formally obtained from the federal government. Regardless of the method, both land acquisition and population increased, and by 1900 the inhabitants of the three-county area numbered 35,903. Along with the rising number of settlers came expanded economic opportunities.

Around the turn of the century, the Eagle Pencil Company began cutting cedar trees and floating them downriver to Gilbert, where they were taken by railroad to be converted to pencils. The cedar harvest was a great boon to the economy. The pencil company ceased operations around 1915, having depleted the cedar supply to the point where the cutting of that wood was no longer a profitable business. Selected removal of other trees continues, however, and provides an income for several small sawmills along the Buffalo River.

During the second decade of the new century, a lead and zinc mining boom in the Arkansas Ozarks fostered the rapid growth of towns like Ponca and Rush. Mining ventures remained prosperous following WW I and during the twenties, but the industry folded and the population declined during the depression in the 1930s. Following the depression, people began to return to the Buffalo River, although certainly not in great numbers.

EXISTING RESOURCES

Cob Cave, which is actually a large cliff shelter, is an archeological site about a mile up the Lost Valley trail. It was a dwelling site for Indians before early explorers came into the region. It is so named because the earliest archeological diggings uncovered many small corncobs. Today there are no apparent traces of this past occupation.

At Ponca, the Beaver Jim boyhood home, on the west side of Arkansas 43, and the Villines farmstead (also known as the Beaver Jim, Jr., cabin), just east of the low-water bridge, are historic structures that have been proposed for nomination to the National Register of Historic Places (see appendix C).

The Boxley grist mill (known also as the old Boxley water mill, the Villines mill, and the Whiteley mill) is listed on the National Register of Historic Places (regional significance). The original mill operated from approximately 1840 to 1870 and then was replaced by the existing structure, which operated until about 1950. It is a wood frame building now in a state of disrepair because of lack of use during the last 25 years. This building contained a grist mill, flour mill, cotton gin, sawmill, and hammer mill, and many parts of

the machinery are still in place. In its operating days the mill was an important part of the local agricultural community.

COMPLIANCE

To comply with Advisory Council on Historic Preservation regulations (36 CFR Part 800) and with Executive Order 11593, the following actions have been taken: (1) the Arkansas state historic preservation officer has been contacted (his reply in appendix C includes a list of cultural resources in the Steel Creek-Lost Valley area); (2) a careful search of the National Register of Historic Places has been made, which revealed that the only site or structure listed for the Steel Creek-Lost Valley area is the "Old Boxley Water Mill"; (3) a memorandum of agreement (December 1974) pertaining to Buffalo National River cultural resources has been prepared and signed by the National Park Service, the state historic preservation officer, and the Advisory Council on Historic Preservation (also included in appendix C); and (4) two surveys (USDI, NPS 1973 and Kitchen 1975) have been prepared, which identify and evaluate a number of extant cultural resources in the Steel Creek-Lost Valley vicinity.

Archeological resources are fairly widespread in the Buffalo National River area. On June 27 and 28, 1979, the National Park Service conducted an archeological survey of the Lost Valley and Steel Creek development areas as required by Executive Order 11593. The purposes of the survey were to determine (1) the location of all archeological resources in the development areas, (2) whether any archeological sites in the development areas were eligible for inclusion on the National Register of Historic Places, and (3) whether any archeological resources would be impacted by proposed developments.

Three archeological sites, all lithic scatters, were located during the survey. One site, DA-11, is in the south-central portion of the Lost Valley development area; the other two sites are in the Steel Creek development area. One of these, PC-1 (AAS-305), is in the area of the carry-in camp, and the other, AAS-303, is in the vicinity of the residences and canoe launch.

There is not sufficient information at this time to support the nomination of any of the three sites to the National Register of Historic Places. However, the National Park Service will treat these sites in accordance with current management policies, activity standards, and cultural resource management guidelines. This treatment will emphasize preservation of the sites through avoidance during any future development. If, for any reason, an unavoidable adverse effect on any of the three sites appears imminent, the National Park Service will further evaluate the sites for potential

national register eligibility and institute a program to mitigate any adversity as prescribed by applicable management policies, standards, guidelines, legislation, and regulations.

The Beaver Jim boyhood home and the Villines farmstead are historic structures that are potential sites for nomination to the national register (see appendix C). Prior to implementation of the proposals outlined in this Development Concept Plan, the regional director will secure a determination of eligibility for inclusion of these historic structures on the National Register of Historic Places, as outlined in Executive Order 11593, section 2(b).

SOCIOECONOMIC ENVIRONMENT

The four counties (Newton, Searcy, Baxter, and Marion) in which the Buffalo River lies are rural and sparsely settled. Steel Creek, Ponca, and Lost Valley are in Newton County. Population declined during the 1960-70 period in Newton (-2 percent) and Searcy (-4 percent) counties. According to the 1970 census, the population density per square mile for Newton County is 7.1--the lowest density of any county in Arkansas. The population of Newton County is 5,844.

Population patterns of the four-county area reflect the relative lack of economic opportunity and consequent migration to areas and occupations in which there is the chance for improving income. The high median ages in the four counties result from both out-migration of young persons from farms and small communities and in-migration of retirement-age individuals attracted by favorable regional cost of living, tax structure, and recreational resources.

The components of population change for the 1960-70 decade show net migration as the principal factor in population losses in Newton County (see table 2).

Table 2

POPULATION CHANGES - NEWTON COUNTY, 1960-70

Births	Deaths	Natural Increases	Net Migration Number	Net Migration Percent
946	565	381	-500	-8.5

Projections by the U.S. Water Resources Council of regional economic activity for a 29-county water resource area in Arkansas, including Newton County, and adjacent Missouri are presented in table 3.

Table 3

U.S. WATER RESOURCES COUNCIL PROJECTIONS OF ECONOMIC ACTIVITY IN NORTHERN ARKANSAS AND ADJACENT MISSOURI (29 COUNTIES)

	1969	1980	2000	2020
Population, midyear	342,277	352,300	382,700	438,000
Per capita income (1967)	1,816	2,604	5,328	10,363
Per capita income, relative (U.S.=1.00)	.53	.55	.64	.73
Total employment	109,136	116,700	139,000	171,100
Employment/population ratio	.32	.33	.36	.39
Earnings per worker (1967)	3,962	5,724	10,790	19,711
Earnings per worker, relative (U.S.=1.00)	.58	.61	.68	.74

Mountain Home (estimated 1980 population 12,000) in Baxter County and Harrison (estimated 1980 population 10,000) in Boone County are major economic growth centers in the region. Population has increased steadily in these two cities since 1960. Pleasant climate, abundant recreation, available work force, and an improving transportation network have contributed to a steadily increasing population in all of northwestern Arkansas.

Table 4 illustrates the income and employment structure in Newton County.

Table 4

INCOME AND EMPLOYMENT STATISTICS-NEWTON COUNTY

Per Capita Personal Income		Percent Change in Total Employment		Unemployment Rate	
1960	1970	Agricultural	Nonagricultural	1960	1970
$610	$1,649	-35.3	88.9	10.3	11.8

At the present time, the number of economic farm units has decreased through consolidation, and the average size per farm is on the rise. Pasturage is the principal agricultural use. Marginal agricultural land in the area has often been converted to timber production. The Buffalo River study area is generally more forested than the state as a whole. In 1969 Newton and Searcy counties were 82 percent forested and the state was 54 percent forested. The forest resource base is adequately protected because the cutting rate for hardwood sawtimber stock is less than the rate at which stock reaches maturity.

consultation and coordination

Much of the basic environmental data in this document has been supplied by Comprehensive Professional Services, Inc., of Little Rock, Arkansas.

This Development Concept Plan will be circulated to the following organizations and individuals for comments:

FEDERAL AGENCIES

Advisory Council on Historic Preservation
Department of Agriculture
    Forest Service
    Soil Conservation Service
Department of the Army
    Corps of Engineers
Department of Housing and Urban Development
Department of the Interior
    Bureau of Indian Affairs
    Bureau of Land Management
    Bureau of Mines
    Bureau of Reclamation
    Fish and Wildlife Service
    Geological Survey
    Heritage Conservation and Recreation Service
Environmental Protection Agency
Federal Power Commission

STATE AGENCIES

Arkansas Archeological Survey
Arkansas Committee on Stream Preservation
Arkansas Department of Parks and Tourism
Arkansas Department of Planning
Arkansas Forestry Commission
Arkansas Game and Fish Commission
Arkansas Highway Commission
Arkansas Historic Preservation Officer
Arkansas Historic Preservation Program, Staff
Arkansas Parks/Recreation and Travel Commission
Northwest Arkansas Economic Development District, Inc.

OTHER ORGANIZATIONS AND INDIVIDUALS

Newton County Planning Board
Newton County Chancery and Circuit Court
Newton County Judges
Newton County Sheriffs
Ozark Society
Sierra Club
University of Arkansas

appendixes/bibliography/planning team

APPENDIX A:
MANAGEMENT OBJECTIVES

To preserve the natural river scene and maintain a free-flowing, nonpolluted river and to protect the historical, archeological, and cultural remains from loss through the securing of a land base within the authorized boundaries through acquisition or other means; the implementation of a viable research program; the initiation of programs of stabilization, maintenance, and protection; and, as needed, the modification of management practices and other means of eliminating conditions having adverse effects.

To provide significant recreational opportunities for visitors to the national river by reducing congestion at river put-in and take-out areas during periods of heavy visitation; permitting hunting and fishing (in designated areas in accordance with appropriate laws and consistent with the park's purpose); analyzing and evaluating the three primitive areas nominated for wilderness and encouraging backcountry use therein within yet-to-be-established carrying capacities; and providing a varied and balanced interpretive program, which emphasizes the river and the historical and archeological past and enhances visitor understanding of and interest in the past and present life in the Ozark Highlands and environment, which are still undergoing change.

To coordinate, encourage, and administer a viable research program, emphasizing the inventorying, identifying, and monitoring of the scenic, geologic, historic, hydrological, archeological, and general scientific values, as well as the physiographic and geologic condition of the river; the reintroduction of extirpated species where feasible; the maintenance of open fields where scenic and wildlife habitat will be enhanced; and the promotion of special protection for all rare and endangered species.

To maintain and foster close liaison and cooperation with governmental and nongovernmental entities and individuals who have an interest in the national river and its surroundings in order to achieve the area's purpose through the most harmonious integration possible of activities inside and outside of the national river boundaries.

APPENDIX B:

RARE PLANTS OF THE PONCA AREA

Scientific Name	Common Name	Habitat and Location	Status in Buffalo National River*
Carex careyana Torr.	Sedge	In middle area of Leatherwood Creek	E
Carex jamesii Schwein	Sedge	In middle area of Leatherwood Creek	E
Diarrhena americana Beauv		In Hemmed-in-Hollow and Leatherwood Creek	R
Juniperus ashei Buchholz	Ashe's juniper	In cedar glade northwest of camp area in Lost Valley	R
Tradescantia ozarkana Anderson & Woodson	Spiderwort	East-facing slope 1 mile north of Ponca	R
Cypripedium calceolus L. var. parviflorum (Salisb.) Fern.	Small yellow ladyslipper	Northwest of campground in Lost Valley	T
Heuchera villosa Michx. var. villosa	Alum root	Near streams in Lost Valley, Indian Creek, and Leatherwood Creek	R
Cotinus obovatus Raf.	American smoke tree	In Lost Valley and Hemmed-in-Hollow	R
Panax quinquefolium L.	Ginseng	In middle area of Leatherwood Creek	T
Phlox bifida Beck. var. bifida	Sand phlox	In Lost Valley and Indian Creek	E
Lithospermum latifolium Michx.	Gromwell	In Lost Valley and vicinity of Ponca	E
Brickellia grandiflora (Hook.) Nutt	Tassel flower	In Leatherwood Creek, Big Bluff, and Lost Valley	R

Source: R. E. Babcock, "Part IV: Final Report, Buffalo National River Ecosystems" (Arkansas Water Resources Research Center, University of Arkansas, 1978).

*Symbols:
- R: Rare - occurs in small numbers, but not in danger of extinction
- T: Threatened - not in immediate danger of extinction, but in greater jeopardy than rare species; may need protection
- E: Endangered - in danger of extinction in part or all of its range; needs protection

APPENDIX C:
HISTORIC PRESERVATION CORRESPONDENCE

ARKANSAS HISTORIC PRESERVATION PROGRAM

1023 WEST THIRD STREET LITTLE ROCK, ARKANSAS 72201 501-374-0375

HISTORY ARCHITECTURE CULTURE ARCHEOLOGY

SUITE 1030, PLAZA WEST, MC KINLEY STREET AND LEE AVENUE
LITTLE ROCK, ARKANSAS, 72205 501-374-8715

SERVICE CENTER
JUL 16 '74

July 11, 1974

Mr. Frank L. Huntsman
Acting Team Manager, Southwest Team
National Park Service
Denver Service Center
Post Office Box 25287
Denver, Colorado 80225

Dear Mr. Huntsman:

This letter is written in response to your inquiry of July 10, 1974, concerning properties of historic significance located in the Ponca area of the Buffalo National River.

Your letter was referred to the professional staff of the Arkansas Historic Preservation Program for their review and comment. The staff has reported the nomination of the "Old Boxley Water Mill" was submitted to the National Register and is still pending approval by the National Register office. The mill is owned by Mr. Clyde Villines of Boxley, Arkansas. A copy of the nomination is enclosed.

The Historic Preservation office has no record of a Villines farmstead at Ponca and has not submitted it to the National Register. However, your reference to the Villines farmstead could refer to the Boxley Mill. In that case, the property has been nominated. Please check our enclosed nomination of the Boxley Mill to clarify this point.

The county survey files of the program list two other historic properties in the Ponca area. Though not listed on or nominated to the National Register, the Beaver Jim House and Cabin are both log structures with significance. The two structures are marked on the enclosed map.

Please continue to keep us informed on National Park Service plans for the Buffalo National River. We are most happy to cooperate with you in the planned development of this area.

Sincerely,

William E. Henderson
State Historic Preservation Officer

WEH:cm

Advisory Council
On Historic Preservation
1522 K Street N.W. Suite 430
Washington D.C. 20005

--March 19, 1975

Mr. Theodore R. Thompson
Acting Regional Director
Southwest Region
National Park Service
P.O. Box 728
Santa Fe, New Mexico 87501

Dear Mr. Thompson:

The Advisory Council is pleased to inform you that the Memorandum of Agreement for the Cultural Resources of Buffalo National River, Arkansas, has been approved by the Chairman of the Council. This completes the Section 106 process and the National Park Service may proceed with the Buffalo National River Master Plan and Wilderness Recommendation.

A copy of the Agreement is enclosed.

The Council appreciates your cooperation in the resolution of this matter and commends your contribution to the preservation of our national heritage.

Sincerely yours,

John D. McDermott
Director, Office of Review
and Compliance

Enclosure

(x) AR0-Adv. Comm
(x) DR Staff

The Council is an independent unit of the Executive Branch of the Federal Government charged by the Act of October 15, 1966 to advise the President and Congress in the field of Historic Preservation.

Advisory Council
On Historic Preservation
1522 K Street N.W. Suite 430
Washington D.C. 20005

MEMORANDUM OF AGREEMENT

WHEREAS, the Department of the Interior, National Park Service proposes to adopt the Buffalo National River Master Plan and make a Wilderness Recommendation for the Buffalo National River; and,

WHEREAS, the Department of the Interior, National Park Service has determined that these undertakings as proposed could have an adverse effect upon cultural resources that appear to be eligible for inclusion in the National Register of Historic Places, and pursuant to Section 2(b) of Executive Order 11593, has requested the comments of the Advisory Council on Historic Preservation; and,

WHEREAS, pursuant to the procedures of the Advisory Council on Historic Preservation (36 C.F.R. Part 800), representatives of the Advisory Council on Historic Preservation, the National Park Service, and the Arkansas State Historic Preservation Officer have consulted and reviewed the undertaking to consider feasible and prudent alternatives to satisfactorily mitigate the potential adverse effects; now,...

THEREFORE: It is mutually agreed that implementation of the undertaking, in accordance with the attached "National Park Service proposal to remove and/or mitigate any adverse effects on cultural resources within the Buffalo National River that might result from the Buffalo River Master Plan and Wilderness Recommendation," submitted by letter dated December 24, 1974 from Theodore E. Thompson, Acting Regional Director, Southwest Region, National Park Service, will satisfactorily mitigate any adverse effect on the above-mentioned properties.

Executive Director
Advisory Council on Historic Preservation

(date)
National Park Service
Department of the Interior

2-25-75 (date)
Arkansas State Historic Preservation
Officer

3/13/75 (date)
Chairman
Advisory Council on Historic Preservation

APPENDIX D:
COMPARATIVE FACILITIES CHART-
PROPOSAL AND ALTERNATIVES A AND B

	LOST VALLEY	PONCA	STEEL CREEK	BOXLEY
PROPOSAL	Information exhibit Parking (35 cars) Picnic area (existing) with restrooms Trails Community center (existing) Residence (existing)	Historic buildings (existing) Parking (20 cars) with restrooms Trails	Canoe-launching sites (2) Swim beach Carry-in campground (80 sites) Picnic areas (2; 20 sites total) with restrooms Seasonal contact station Residence (existing) Maintenance/storage buildings (existing) Sewage treatment facilities Parking (333 cars)	Historic building (existing) Parking (10 cars) with restrooms
ALTERNATIVE A	Information/ranger station Picnic area (15 sites) Carry-in campground (40 sites) RV campground (20 sites) Parking (75 cars) with restrooms Residences (2) and seasonal apartments Sewage treatment facility Trails Community center (existing)	Historic buildings (existing) Parking (20 cars) Trails	Canoe-launching sites (2) Carry-in campground (80 sites) Information/ranger station with restrooms Residences (2; 1 existing) and seasonal apartments Maintenance/storage buildings (existing) Sewage treatment facilities Parking (300 cars)	Historic building (existing) Parking (15 cars) with restrooms Trail
ALTERNATIVE B	Information exhibit Picnic area (15 sites) Parking (35 cars) with restrooms Residence Trail Community center (existing)	Historic buildings (existing) Parking (20 cars) with restrooms Trails	Canoe-launching sites (2) Swim beach Carry-in campground (80 sites) RV campground (35 sites) Amphitheater Picnic areas (2; 20 sites) with restooms Information/ranger station Residences (2; 1 existing) and seasonal apartments Maintenance building Storage buildings (existing) Sewage treatment facilities	Historic building (existing) Parking (15 cars) with restrooms

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As the nation's principal conservation agency, the Department of the Interior has basic responsibilities to protect and conserve our land and water, energy and minerals, fish and wildlife, and parks and recreation areas, and to ensure the wise use of all these resources. The department also has major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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